

The Electragist

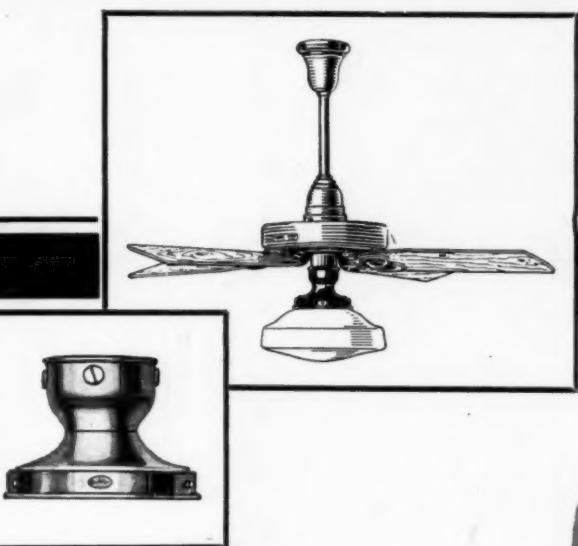
TRADE MARK REG. U.S. PAT. OFFICE

Vol. 24, No. 7

Association of Electragists
INTERNATIONAL

MAY, 1925

RED SPOT



A Seasonable
"Red Spot"

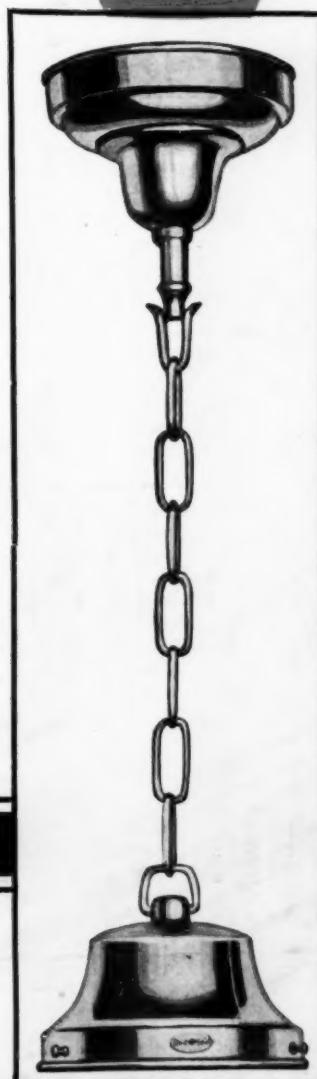
for

Attaching Lights to Ceiling Fans

This special "Red Spot" Hanger may be attached to any ceiling fan and gives safe and rigid support to lamp and globe. The Unit consists of a 22 gauge brass shell which bolts securely to the frame of the fan. Glassware is held by bevel pointed screws which cannot become loose by vibration.

School Lighting Your Next Opportunity

Standard "Red Spot" Hangers in either stem or chain suspension are easily sold for school lighting service. The reason is simple: When you go to the school board or school architect and explain that "Red Spots" are made in accordance with the rigid Wakefield Specification, they know they are getting real quality, and when you quote "Red Spot" prices they know they are getting sound value. We can help you get school lighting business. Write.



THE F. W. WAKEFIELD BRASS COMPANY

VERMILION, OHIO

Pacific Coast Representative: Geo. A. Gray Company, San Francisco and Los Angeles



SILVERLITE
Trade Mark

Has Made Good

OVER two years ago we started to test Silverlite all metal reflectors in our laboratories. The results were so perfect we were almost afraid of them.

We had other unbiased laboratories check our tests. The results were the same.

Then we started actual window tests in carefully selected locations. Silverlite made good.

Today Silverlite is recognized everywhere as the most efficient, most economical window reflector yet produced.

All metal, unbreakable, extension neck allowing alternate use of different lamps in the same reflector. Non-peeling, light in weight, beautiful, compact to stock; profitable to handle. All proven Silverlite features. Write for complete information.

I.P. FRINK Inc.

24th Street and 10th Ave., New York

Canada: Associated with The Robert Mitchell Co., Ltd., 64 Belair Ave., Montreal
 Chicago, Ill. San Francisco, Cal. Pittsburgh, Pa. Atlanta, Ga.
 Boston, Mass. Cleveland, O. Los Angeles, Cal. Birmingham, Ala.
 Detroit, Mich. Portland, Ore. Seattle, Wash. Philadelphia, Pa.
 Cincinnati, O. Washington, D. C. Buffalo, N. Y. St. Louis, Mo.

Recent Silverlite Installations:

The Wonder Millinery Store
Portland, Oregon

L. H. Barber Company,
Stationers
Oakland, Cal.

Kurzman Inc.,
5th Ave. and 36th Street
New York City

Dobbs, Inc., 620 Fifth Ave.,
New York City

Walkover Shoe Store, Main St.
Yonkers, N. Y.

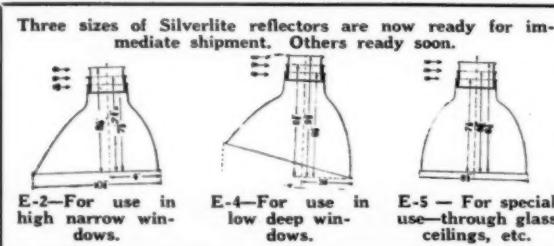
Meekins, Packard & Wheat
Springfield, Mass.

Strawbridge & Clothier
Philadelphia, Pa.

The Stern & Mann Company
Canton, Ohio

The Kelly Company
62 Whitehall Street
Atlanta, Ga.

Davison, Paxon, Stokes
59 Whitehall St.
Atlanta, Ga.



Here is the Way to Get Cost Plus Profit On Every Job

By LAURENCE W. DAVIS
General Manager, Association of Electragists

IN defining its policy of distribution as "from manufacturer through jobber through contractor and dealer to consumer" the Association of Electragists has stated the direct, economical channel for trade to follow. Whether trade can follow that channel depends upon its being kept free from obstructions or obstacles which must be gone around. Any condition or practice on the part of jobbers or of contractors and dealers which shows up or obstructs distribution at any point will inevitably result in the by-passing of that obstruction.

Definite resistances exist today in the contractor-dealer and contractor distribution channel which have resulted in constant by-passing of the contractor by jobber and manufacturer. Those obstacles or resistances have been set up by the contractors themselves through failure to allocate expenses properly to their different classes of sales, resulting in distribution costs too high in sales of certain classes to permit their smooth passing through the contractor. The condition can be changed by any contractor in his own business by readjustment of his accounting practices, and the result will open up channels of business to him that

have long been closed and bring a profit on other business that has been unprofitable in the past.

It must be borne in mind that the jobber and the manufacturer began to by-pass the contractor not for the fun of it but because they saw that they were losing business by insisting that all orders for apparatus and supplies come through the contractor. The jobber and the manufacturer will welcome any change which will not unduly disturb their volume and yet which will eliminate a lot of direct selling ex-

pense. Such a plan as is here proposed will do just that.

With this article is presented a table (1) showing a typical contractor-dealer business doing over \$100,000 a year in gross business. It is a sound business, efficiently and economically managed. By good salesmanship and judgment in bidding it did that volume of business and made a small profit.

Yet the doors of certain classes of the contractor's business were closed against it. Time and again after creating a market for a sale the contractor

was by-passed by a jobber or a manufacturer and the sale taken away from him. Contracting sales were frequently cut in two, profits wiped out and losses sustained — not because the contractor was failing to function as a contractor and salesman, but because the costs of operation had not been analyzed and allocated where it belonged.

The contractor-dealer business is not one business. It is several distinct, though co-ordinated, businesses, each carrying distinct and widely differing overhead costs, the recognition of which is essential in determining the proper cost to the customer for each class of sale.

Especially is this true in the

TABLE 1—CONTRACTOR-DEALER BUSINESS STATEMENT

		Percent. Net Sales	Percent. Cost of Sales
Gross Business Billed.....	\$101,260.08		
Less Allowances & Cash Disc. Allowed	1,080.00		
Net Sales Billed.....	\$100,180.08	100%	100%
Cost of Sales.....	72,678.78		
Gross Margin.....	\$ 27,501.30	27.4%	37.8%
Overhead	23,112.90	23 %	31.8%
Operating Profit.....	\$ 4,388.40	4.3%	
Cash Disc. Earned.....	216.00		
Total Net Income.....	\$ 4,604.40	4.6%	
ITEMS OF OVERHEAD			
1. Manager's salary.....	\$ 5,800.00		
2. Other salaries.....	4,500.00		
3. Non-productive labor.....	729.18		
4. Rent.....	3,000.00		
5. Light, heat and power.....	441.36		
6. Telephone and telegraph.....	277.90		
7. Postage	144.00		
8. Stationery and office supplies.....	448.54		
9. Advertising.....	1,101.60		
10. Autos and trucks.....	1,582.02		
11. Insurance	225.90		
12. Taxes.....	270.00		
13. Repairs and maintenance.....	540.00		
14. Association dues.....	135.00		
15. Travel and entertaining.....	590.00		
16. Miscellaneous.....	429.40		
17. Reserves:			
Loss on Notes and A/C Rec.....	792.00		
Depreciation on Furniture and Fixtures.....	180.00		
Depreciation on Tools.....	270.00		
Depreciation on Autos.....	900.00		
Depreciation on Merchandise.....	756.00		
Total	\$23,112.90		

contracting business where the practice of so many contractors has been to figure all items in construction sales as carrying an equal share of the contractor's overhead. That was possible only so long as the contractor handled materials that could not be more economically sold through other channels. The moment he tried to sell motors, apparatus, lighting units or large quantities of other materials, he found there were other suppliers ready to sell his customers for much less than he could. It was inevitable that they should, since such direct sales can be made with practically none of the contractor's overhead.

The contractor's disadvantage was not in any inefficiency or too high overhead as a contractor, but because selling large units of apparatus and materials is not construction work and can be done at much less cost. The moment he set up the obstruction of a higher price in the channel of distribution through him, the trade flowed around him through other outlets.

The sale of apparatus is an important item to the contractor, not so much from the standpoint of profits on the apparatus as because such sales bring additional wiring business. In the installation of apparatus especially, the

first order is generally the forerunner of others, such as the installation of additional motors, transformers, factory lighting and the like. Furthermore, when

this business gets into a supplier's hands there frequently results the creation of a wiring department in that factory. It is essential, therefore, that the contractor find a way, such as is here advocated, to regain his rightful position in the apparatus market.

How then can the contractor separate material and apparatus sales from his construction sales so as to determine the ratio of his overhead to that part of his contracting business that will carry it?

By applying all of the overhead to labor only.

Contracting is the installation of materials with labor—labor that is directed, supervised and equipped by the engineering ability of the contractor. Therefore, by adding to the cost of wages for that labor the overhead cost of operating the contracting business, the true cost of that labor may be determined.

With this "cost of labor" determined by finding the percentage of overhead to total labor used and adding this percentage to the wage rate, the contractor knows his true cost of labor per hour. And with this figure he can take any job at *cost plus*, for anything over his invoice cost of materials and this true cost of labor is a profit.

TABLE 2—ALLOCATION OF OVERHEAD EXPENSES

Items	Total	Contracting	Merchandising
1. Managers salaries	\$ 5,800.00	\$ 4,200.00	\$ 1,600.00
2. Other salaries	4,500.00	1,980.00	2,520.00
3. Non-productive labor	729.18	729.18	-----
4. Rent	3,000.00	1,290.00	1,710.00
5. Light, heat & power	441.36	81.36	360.00
6. Telephone & Teleg'ph	277.90	187.90	90.00
7. Postage	144.00	108.00	36.00
8. Stationery and Office Supplies	448.54	328.54	120.00
9. Advertising	1,101.60	669.60	432.00
10. Autos & Trucks	1,582.02	1,310.02	272.00
11. Insurance	225.90	207.90	18.00
12. Taxes	270.00	216.00	54.00
13. Repairs and maintenance	540.00	100.00	440.00
14. Association dues	135.00	115.00	20.00
15. Travel and entertaining	590.00	540.00	50.00
16. Miscellaneous	429.40	267.40	162.00
17. Reserves:			
Loss on Notes and A/C Rec.	792.00	720.00	72.00
Depreciation on Furniture and fixtures	180.00	108.00	72.00
Deprec. on Tools	270.00	270.00	-----
" " Autos	900.00	774.00	126.00
" " Mdse	756.00	450.00	306.00
Total	\$23,112.90	\$14,652.90	\$ 8,460.00

TABLE 3—SEPARATION OF BUSINESS STATEMENT

	Percent. Sales Billed	Percent. Cost of Sales
<i>Merchandising Dept.:</i>		
Sales Billed: Lamps	\$ 4,889.88	
Store	23,195.34	
	<u>\$28,085.22</u>	100%
Cost of Mdse.		
Sold: Lamps	3,330.72	
Store	15,537.60	
	<u>\$18,868.32</u>	100%
Gross Margin Overhead	\$ 9,216.90	32.8%
	<u>8,460.00</u>	30.1%
Net Profit	<u>\$ 756.90</u>	2.7%
<i>Contracting Dept.:</i>		
Sales Billed	\$73,174.86	100%
Cost of Sales (Prime Cost):		
Mdse.	\$30,429.90	
Labor	20,165.94	
Direct job expense	976.50	
Comm.	2,059.56	
	<u>\$53,631.90</u>	100%
Gross Margin Overhead	\$19,542.96	26.7%
	<u>14,652.90</u>	20.%
Net Profit	<u>\$ 4,890.06</u>	6.6%
Percentage of Overhead Applied to Labor only		72.6%

TABLE 4—TRYING TO SELL JOB WITH OVERHEAD APPLIED TO COST OF MATERIALS AND LABOR (PRIME COST)

Overhead on Prime Cost.....	27.3%
Profit desired.....	10. %
Necessary to Add to Prime Cost.....	37.3%
<i>Customer offers Job on Percentage Basis, but will listen to nothing more than "20 and 10" on Prime Cost. This equals 32% on Prime Cost and leaves the contractor with a profit of 4.7%.</i>	
Contractor submits preliminary estimate as follows:	Result
Materials, at cost	\$1,000.
Labor, at wage cost:	
500 hours @ \$1.00	\$500.
250 hours @ .60	150.
	<u>650.</u>
Prime Cost	\$1,650.
Add 20% for overhead (?)	330.
	<u>\$1,980.</u>
Add 10% for profit (?)	198.
	<u>\$2,178.</u>
Selling price	\$2,178.
	<u>\$858.</u>

On the average job where there is no competition on the sale of materials, it is of little consequence whether the overhead is obtained by spreading it as a smaller percentage over both materials and labor or whether it is obtained as a larger percentage added only to labor—the customer pays it anyway, as the customer must if the business is to continue. But it is impossible to know always when competition is going to develop on some important part of the materials or apparatus to go into the job—therefore it is important that all work be figured by the same method of adding overhead entirely on labor.

The contractor is then offering the customer the materials at the actual invoice cost price plus a reasonable profit; if necessary this profit can be shaved down to cost; and if even then the sale of the materials is lost the job still carries all of the overhead on the labor plus a profit there.

Materials can be bought by the customer from other suppliers than the contractor, but labor, although it can be hired by the customer, cannot be directed, supervised, equipped and backed by engineering experience by the customer at as low a cost as by the contractor whose business it is. It is much easier to sell labor at cost to include all overhead than to sell materials at a price that includes any markup which other suppliers do not need to add. Besides, in the case of industrials as customers, the method of adding all overhead to labor is in accord with their own practice, since most manufacturing concerns apply overhead entirely to labor in their accounting.

How does it work out?

Turning to Table 1, showing a combined contractor-dealer business statement, you will note net sales billed amounted to \$100,180.08 and cost of those sales \$72,678.78, leaving a gross operating margin of \$27,501.30, from which is deducted his overhead cost of doing business \$23,112.90, leaving his profit. This overhead on the total contractor-dealer business averaged 23 percent of sales billed, or 31.8 percent of the prime cost of those sales, and in order to make 4.3 percent profit on those sales it was necessary to mark up the prime cost 37.8 percent on all sales, as shown by the gross margin.

This business statement, which is a typical contractor-dealer statement, holds some dangerous conditions. First, it does not tell the contractor-dealer

what his merchandise sales cost him. Since the average overhead shown is 23 percent then apparently an article bought at a 25 percent discount would leave 2 percent profit; but read on.

In Table 2 the items of overhead have been properly allocated to the contracting and merchandising departments. Each item is handled separately and allocated as closely as possible to the proper department. As a result we find that the \$23,112.90 total overhead breaks up into \$14,652.90 overhead on

percent, showing a profit of 2.7 percent.

The lower half of Table 3 shows contracting department sales billed of \$73,174.86, and prime cost of sales \$53,631.90, leaving a gross operating margin of \$19,542.96, or 26.7 percent of sales billed. In order to get this margin it was necessary to markup the prime cost of all contracting jobs 36.4 percent. From Table 2 we find the allocated contracting overhead is \$14,652.90, which, instead of the 23 percent on the combined contractor-dealer busi-

TABLE 5—SELLING THE JOB WITH OVERHEAD APPLIED TO LABOR ONLY

(Percentage Overhead to Labor 72.6%—use 75%)

Take work at Cost plus 10%

Cost of Materials to be Suppliers' Invoice Prices

Cost of Labor is:

Wage per hour \$1.00 plus 75% = \$1.75	Journeymen
Wage per hour .60 plus 75% = 1.05	Helpers

Billing of Job

Materials, at invoice cost.....	\$1,000.00
Labor, at cost:	

500 hours journeymen @ \$1.75.....	\$875.00
250 hours helpers @ 1.05.....	262.50

1,137.50

Total Cost.....	\$2,137.50
-----------------	------------

Add 10% profit.....	213.75
---------------------	--------

2,351.25

Selling Price.....	\$2,351.25
--------------------	------------

If contractor cannot make sale of materials *at cost*, with or without 10% profit, the job still holds *all* of his overhead and the following profit:
Labor, at customer's cost:

500 hours journeymen @ \$1.75.....	\$875.00
250 hours helpers @ 1.05.....	262.50

1,137.50

Total Cost.....	\$1,137.50
-----------------	------------

Add 10% profit.....	113.75
---------------------	--------

1,251.25

contracting, and \$8,460. overhead on merchandising.

Table 3 then shows the separation of the business statement into a merchandising department and a contracting department.

In the merchandising department the sales amounted to \$28,085.22, which cost \$18,868.32, leaving a gross margin of \$9,216.90. Applying the merchandising overhead of \$8,460. to these sales shows an overhead of 30.1 percent in merchandising instead of the 23 percent average on the combined business, and shows how essential this information is when considering handling appliances offered at 25 percent discount. The actual margin obtained, including those items which could be marked up at the control of the dealer, was 32.8 percent, or an average mark up of costs of 48.8

ness, is 20 percent of sales, or 27.3 percent of prime cost as shown. Note that if the overhead is applied to the labor only, namely, \$20,165.94, the percentage is 72.6 percent.

Table 4 shows the common result of trying to sell a job with the overhead applied to cost of both materials and labor. The actual overhead was 27.3 percent on prime cost, so that for the contractor to make 10 percent profit he must add 37.3 percent to the cost of materials and labor. Competition, however, has established 20 and 10 as about the best he can do on jobs of any size—not 20 percent *overhead*, for his overhead is 27.3 percent. This means a mark up of 32 percent on the 20 and 10 basis which leaves him only 5.7 percent profit.

However, the dangerous thing he

(Continued on page 17)

How We Sell Motors in Competition With Manufacturers and Jobbers and Make Money

By M. L. POMARES

Vice-President, Austin & Moore, Inc., Long Island City, N. Y.

IF a manufacturer or a jobber can sell a customer a motor or a transformer or anything else that I ought to sell him, so can I—only I must meet his price.

For years that worried us because our company does only power work, that is, work where the apparatus and material is more than half the cost, sometimes 75 percent of the cost of the job. It worried us not only because the manufacturer and jobber were by-passing us and we were losing apparatus orders, but because we stood a good chance of losing the entire job if we lost the apparatus sale.

So about a year ago, after coming to the conclusion that we could never make over the manufacturer or the jobber, we decided to make over ourselves. In changing our methods to enable us to compete we had to bear in mind (1) that each job must bring a profit and (2) that whatever the new method should be it must be fair to the customer. It makes no difference what you try to do; unless it is sound and logical and in keeping with the customer's interest, it won't work.

Up to that time we had been operating in the standard fashion of determining the overhead on the basis of gross business and then marking up the combined labor and material cost of each job sufficient to bring this overhead and a profit on the selling price. That was fine, except for two things.

The most we could hope to make on motors in competition was 10 percent on our cost and sometimes not that. Therefore every time we took a job where we sold the motors without overhead added, we lost money; because the labor had only the regular overhead on it. If we tried to add our overhead to the motor cost we lost the sale, and frequently the wiring as well.

The other drawback that we experienced in trying to apply the standard method arose in percentage work. Gen-



Mr. Pomares admits that some of a contractor's overhead is theoretically chargeable against material. However, he asserts, business is largely a matter of expediency and he has found that charging overhead to labor only and selling material on a cost plus ten percent basis has worked out well for him. This article explains his method of charging overhead and his reasons for using this system.

—The Editor.

erally speaking, percentage work is let on a 10 and 5, a 10 and 10 or a 15 and 10 basis; sometimes it goes to 20 and 10 and that's supposed to be fat pickings. Well, let's see how good it really is. Just to have an easy figure to work with take a job where the prime cost of materials and labor is \$100.00, add 20 percent to cost and we have \$120.00. Then add the 10 percent and we have \$12.00 more or \$132.00 as the price. Thus we have added \$32.00 or 32 percent. In other words a 20 and 10 percentage job gives a markup of 32 percent.

By a simple process in algebra we find that our gross margin on the selling price is 24.24 percent, out of which is to come overhead and net profit.

This is the best percentage—20 and 10—that we ever get. If we take 15 and

10 our gross margin, which is to cover overhead and net profit is 20 percent.

And if we have the more common 15 and 5, 10 and 10 or 10 and 5 we have the following respective gross margins: 17.2 percent, 17.36 percent and 13.4 percent.

Now, where does the average contractor, who has an overhead of anywhere from 20 to 30 percent on gross volume and who is looking for a 10 percent net profit, get off doing percentage work? That was the question we asked ourselves and we naturally had but one answer, "He doesn't."

Nevertheless, we didn't want to lose this percentage work. It was a large part of our volume and we felt that somehow or other it could be handled at a profit and that it was our job to find the way.

And we were right—absolutely right. There is a way.

We now take percentage work on a flat 10 percent on cost basis and make 10 percent net. All of our overhead is charged against labor only and our cost price per labor hour is charged accordingly.

Someone may disagree and say that some of the overhead is properly chargeable only against material. I agree with him, but business is frequently a matter of expediency and it will not be found practical to separate overhead and try to sell it on material.

Our plan, therefore, is to keep our books just the same as before and segregate our costs according to the Standard Accounting System. This shows us an accurate account of the payroll of productive labor, and to it we apply the overhead in order to determine the exact cost of labor to us.

In other words, just to take a simple example, suppose our monthly productive labor payroll was \$4,000 and our overhead \$3,000. We would know that we would have an overhead of 75 cents

per dollar wages. Our real labor cost per hour then would be found by adding 75 percent to the wage rate.

Our own figures for a year happen to be very close to these. In 1924 our payroll was \$47,370 and our overhead \$35,924.

By applying all the overhead against labor—in our case marking up labor 75 percent—we sell all material at cost plus net profit.

In other words, to take the case of a motor installation, we would price all material, including the motors, at our actual cost and all the labor hours at the wage rate plus 75 percent and to the total add 10 percent for profit and the result would be our selling price.

Advantages of Method

Now, this method has a great number of advantages.

First, it has greatly increased our motor business on which we can now make a flat 10 percent net profit instead of taking a loss. We can now compete with anybody and if necessary we can sell apparatus down even to our cost and still make a profit on the job.

Second, by increasing the motor business we have increased our number of wiring installations.

Third, we can now take a motor order with no labor and make a profit whereas formerly unless we got our overhead on it we knew we were losing money because the sale would appear in our volume. We had a case only a few days ago. An industrial wanted \$5,000 worth of motors. We sold them over the telephone at a net 10 percent. It was a case of factory shipment, A-1 credit and about five minutes talk over the telephone.

Fourth, customers can and will check material prices and if you are high they will buy elsewhere. Now we send our customers our invoices. They know we are telling the truth and are not trying to slip anything over on them.

Fifth, our customers can't get out and buy labor cheaper than we can sell it. It is easy to convince them when they question the labor charge. We simply show them that they are not buying just so many hours of a wireman's time but the engineering back of that man, the superintendence, training, guarantee, tools and everything else which the customer would have to provide in some way if he were to undertake the work himself.

Sixth, we find when we charge overhead against productive labor that we

are doing the same thing that all manufacturers do and as they are our customers there is no difficulty in convincing them of the accuracy of our charges. In fact, when we ask them what overhead they charge against labor the answer is anywhere up to 200 percent, so that our little 75 percent looks small.

Seventh, by charging overhead against labor, the difference in the cost of a job, one way or another, is not very great. This I have checked on every job during the past year. Jobs that formerly were losing twenty-five or thirty dollars are now making as much and it is these fifty and sixty dollar differences that at the end of the year account for the bank balance.

Eighth, it is an easy system for billing. Just add 10 percent to your invoices and labor charges. Pin to your statement duplicate invoices and, if you wish, a time record. If the customer thinks you are high or are sending him phoney invoices he will call up a supplier or two. If he complains, you have him call up your supplier without letting on who he is and if your supplier quotes a lower price then you can call him and get a refund for your customer.

Ninth, it prevents your jobber from cutting under you with your customers.

Tenth, it is the only way we know of whereby we can place our costs before a customer on a disputed bill and gain the customer's confidence.

Four Kinds of Jobs

There are only four different kinds of jobs. Contract, jobbing, pickup and percentage.

On contract who cares how you figure? It's your bid price that counts.

On jobbing the manufacturer will recognize your right to charge overhead on labor but not on material.

On pickup work and small repairs we have complaints, but in 90 percent of the cases we find that we can convince the customer that our charge is not exorbitant.

On percentage work our bookkeeper has only to add the percentage to our actual cost of material and our labor charge.

We have been using this system for the past year with all new customers. We naturally couldn't put it in force right away with all our old customers, particularly when many of them had for years been accustomed to having us do work on a fixed percentage basis on total prime cost.

Each month we know our productive

labor cost and overhead for the month and for the year to date and we are now going to go a step further and always know these for the previous 12 months.

We have our amount to add to wages for overhead all charted out on a table and this is unchanged until we see a definite trend one way or another.

We are convinced that charging overhead to labor is the only right and profitable way of conducting our business. We have proved it definitely to our own satisfaction.

Cost Plus Profit

(Continued from page 15)

faces is not the difference in percentages but the fact that he is asking 20 and 10, or 32 percent, markup, on the cost of materials and apparatus on the job which can be profitably sold to the customer by other suppliers for a great deal less. And when the customer realizes this the contractor may either lose the entire sale or at best only get the labor with his 20 and 10 on that. The danger in such cases must be apparent. The material sales carrying no overhead add to the volume just the same and on this volume the average overhead for the year is figured. Now, if some part of this volume does not carry its share of overhead, there is just so much loss to the business.

Table 5 shows the answer to the problem—selling the job with the overhead applied to labor only. The actual percentage of overhead to labor was 72.6 percent—75 percent is adopted as the ratio. A "customer's cost" for labor is obtained by marking up the wage rates 75 percent. Then the work is figured at cost plus 10 percent. The jobber's invoices for materials can be furnished to the customer and duplicate time slips sent with the bill, to be multiplied by the "labor cost" price. To this cost of materials and labor is added the agreed profit on the job.

This method of selling the job gives the contractor a new position as a distributor of the manufacturer's materials, for by it he is separating automatically his contracting business into construction and selling. He is the logical seller of materials through his direct and constant contact with the consumers, and knowledge of the customer's requirements. Under this plan he becomes the most economical outlet as a seller, for his prices need only carry a fair profit.

The Use of Mechanics' Lien by Sub-Contractors

By ALBERT W. FRIBOURG

THE power of collecting debts through the levying of a mechanics' lien is a special privilege which the law gives to persons furnishing material or labor for the construction of improvements upon real estate. In every state contractors are permitted to employ mechanics' liens when they have not been paid for work done upon a newly constructed house, and in most states, today, they can use this means of collecting even if their work merely amounted to repairs.

Methods of Collecting

Bad debts are usually collected by means of a court action, trial by jury, judgment and execution. A summons and complaint is drawn, the debtor is served, and the trial placed upon the court calendar. After a time, which may be as long as two years, the case is called to trial. The debtor may demand a jury and the debt must be proven to the jury's satisfaction. Granting that this has been accomplished, a judgment is rendered and the creditor gets the sheriff to seize some of the debtor's property and to sell it at a sheriff's sale. If enough money is realized in this way to pay the debt, the judgment is satisfied and the debt paid.

Such a judgment can also be filed as a lien against any real estate that the debtor may own. But the mechanics' lien is a much shorter method of reaching the same result. If the debt is not paid, the contractor may go directly to the County Clerk's office and file a lien against the property and serve the owner with notice of the lien.

Who Is Entitled to Lien

The New York statute, which is the model from which many of the statutes have been copied, provides that "A contractor, sub-contractor, laborer or material man, who performs labor or furnishes materials for the improvement of real property with the consent or at the request of the owner thereof, or of his agent, contractor or sub-contractor, shall have a lien for the prin-

cipal and interest of the value, or the agreed price of such labor or materials upon the real property improved or to be improved and upon such improvement, from the time of filing notice of such lien. . . ."

A contractor may employ both a mechanics' lien and an ordinary court action to recover a bad debt, if he chooses. They are not affected by each other. The only restraint that a court action or a lien places upon the creditor is the obvious one of preventing him from recovering double payment. If either of them is successful, the other is barred.

A judgment, rendered after trial, is effective against everything the debtor owns. The mechanics' lien is good only against the specific piece of real estate upon which the work has been done. In this matter, therefore, it is less efficient than an ordinary judgment. Its value lies in the rapidity with which it works and the priority which it therefore secures against other debts.

Prompt Action Necessary

This rapidity is at once an advantage and a burden. The law gives the mechanic this quick relief, but it demands prompt action on his part. Most states give him about four months to file his lien. This time starts to run from the completion of the work, and if the lien has not been filed and served before the end of the designated period, the mechanic can no longer resort to this method of collecting his debt. He still has, of course, his action in the courts which may be started at any time before the statute of limitations annihilates the debt, and that takes from five to seven years depending upon the state in which the action is brought.

If the debt is not paid after the lien is filed, the creditor can foreclose and force the sale of the property. This is a court proceeding which is governed by the rules of procedure adopted by the various states. The proceeds are divided among the various creditors, generally in the order in which their

liens have been filed. Usually, the mechanics' lien secures priority over ordinary judgments. A mortgage, existing before the filing of the lien, has priority over the lien.

After a foreclosure, whether it has been brought by the contractor or by some other creditor, the lien which was formerly held against the property, is now held against the money derived from the sale and the contractor has a right to his proportion of it. If he does not get it, he can have recourse to a Court of Equity and compel the possessor to pay it to him, under penalty of imprisonment. This, however, is seldom necessary.

New York Practice

A sub-contractor, and even a laborer in New York, has a right to a lien as well as the original contractor. If the owner of a building lets a contract, and the contractor sub-lets parts of it and fails to pay his sub-contractors, they have a lien against the building.

This principle has been developed in two different ways by the various states. According to the so called Pennsylvania plan, any sub-contractor may have a lien for the reasonable value of his work, even if the owner has paid the entire amount to the original contractor. The owner of the building is responsible for the payment of sub-contractors, and he relegates this duty to his original contractor, at his risk.

Limited to Contract Amount

The New York plan differs from this and makes the owner responsible only for the amount of his contract. Liens up to, but not exceeding, that amount may be filed against the property. But if the original contractor has, in good faith, been paid, the owner's responsibility is at an end. The sub-contractor, then, has no lien against the property, but he has an action, at law, against the original contractor. When the owner pays the contractor, intending to cheat the sub-contractors, his payment is void and they may file their liens.

(Continued on page 30)

“Model Home” Sells Fixtures

How a North Carolina Electrical Firm Has Profitably Adopted the “In-a-Store Home” Idea to Its Individual Shop

By RUEL McDANIEL

NOT long ago a young woman came into the store of Michael & Bivens Company, Greensboro, North Carolina, asked for C. W. McLean, the manager, and said to him: “A neighbor of mine, Mrs. King, told me about your wonderful fireplace and mantel. She says they’re darling, and I would like to see them.”

Mr. McLean showed the young housewife into the living room of the company’s “model home,” which is the store itself, and pointed out the chief features of the fireplace and mantel. “They’re adorable! I want them just like that in my new home which we’re building.”

She admired the other rooms of the shop, then came back to the living room. She looked at the fireplace and mantel minutely, then at the lighting fixtures in place about the room. The final result was that she bought her entire set of fixtures there ‘so that they would match the fireplace and mantel,’ as she put it. And this is not the only sale that the fireplace has brought the company, although it was not built for the purpose of selling lighting fixtures, directly.

Model Home Profitable

The company has its main store and headquarters in Gastonia, North Carolina, doing an electrical contracting business and considerable retailing. The Greensboro store opened about the first of June, last year. During the month of December the volume of sales amounted to a little more than six and a half times the volume for June; and each of the last three months of 1924 the new store showed a profit. The “model home” is one of the chief factors in the store’s excellent showing.

Although the Greensboro store is getting into contracting more and more, retailing is a big thing there. This includes lighting fixtures, cleaners, washers, radio sets and other appliances. There is scarcely any electrical article, Mr. McLean finds, that cannot be sold a good deal easier in the “model home.”



The Entrance to the Home Attracts the Customer’s Eye at Once

The various rooms of the “model home” are built in logical order, and the effect is a beautiful one. The shop has a frontage of about 25 feet. This is practically all glass. For about 15 feet inside the space is given over to the display of merchandise, fixtures and the sales desk.

Stretching across the shop, then, is the porch of the “home.” The roof extends down some five or six feet and is painted green. Steps lead up to the porch, about two feet higher than the sales floor below.

On the porch there are two or three pieces of porch furniture, a radio set and one or two other items that are found on well appointed porches. There are lights and shades especially appropriate for this use.

Next a door leads into a living room, on the same elevation as the porch. In the living room are to be found the fireplace and mantel, which win the admiration of so many women customers; there are chairs and a davenport, lights and fixtures hanging from the ceiling and on the wall. There are a few floor lamps and fixtures displayed on the floor, but they are not so crowded that

the home-like effect is lost.

Then comes the dining room, with the table, set with chinaware, which incidentally is for sale too; the appropriate fixtures and lighting for a well appointed dining room and other touches that make a completely furnished room from an electrical standpoint.

To the left of the dining room is the bath, with all the fixtures and lights in place. Adjoining the bath is the kitchen. Here is an electrical range, connected and ready for action at any time, and various appliances for cooking.

Display Room to Rear

Directly back of the section given over to the dining room and kitchen, there is a display room, the same width as the other “home” rooms. Off to the left of the display room is a small space devoted to the displaying and demonstrating of laundry equipment. In here is an electric washing machine, and ironer and other appliances for washing clothing.

In the display room a full line of fixtures is to be found, and also there are samples of the larger appliances carried by the shop. The workshop and stock room are back of display room.

"The 'home' has been a marvelous help to us in selling fixtures and appliances," declared Mr. McLean. "With the rooms laid out just as nearly as possible like they should be in real homes, it is easy for customers to see just how the various fixtures will look in their own rooms.

"By demonstrating and displaying the larger appliances in their natural places, such as the stove in the kitchen and the washer in the laundry room, we are able to convince a customer more thoroughly of the practicality of an article. It's almost like having the appliance set up in the proper place in her own home."

Besides the practical value in selling fixtures and appliances, the "model home" adds dignity to the shop and in the building of goodwill.

Results of First Year of Registration of British Electrical Contractors

The success of the British plan for national registration of electrical contractors is indicated by the report of the board of registration on results of registration during the first year of its operation. The operation of the plan met with some opposition but seems to be making progress despite that fact.

Down to the date of the last meeting of the board 728 applications for registration had been received; 670 of the applicants had been approved, and to these certificates either had been or were being issued, while 46 had been declined or withdrawn, leaving twelve under consideration. Six municipal authorities had issued notification to the effect

that tenders from registered contractors only would be considered, and in some other cases engineers desired to give approval to the national register, but were awaiting the instructions of their authorities.

Publicity Helpful

The subject of the more or less limited publicity which the movement has received having been raised in some quarters, the executive mentioned the publication of the first lengthy list of registrations. It defended itself against critics who made their statements on the assumption "that the register is a trade organization which exists for the benefits of its members only, and has practically unlimited resources to spend on advertising." The primary object of the Register, it was said, was to afford to the public the means of distinguishing electrical installation contractors who had given evidence of their competency.

One of the features was that practically the whole of the leading installation contracting firms of the highest standing applied for admission at the outset. This was regarded as a source of great strength to the movement, and it has been largely responsible for the preference "that is already apparent on the part of purchasers to place orders with contractors on the Register, even in some cases at a higher price." The executive invited any of the registered 670 to forward names of others who were thought eligible.

A "Cheerio" from the Anti-podes

An idea of the high regard in which Australians hold the methods of the Association of Electragists, International, may be gleaned from the following note appearing in the January issue of the *Australasian Electrical Times*:

"Among visitors to Australia from the U. S. A. this month was Mr. J. Miller, an electrical contractor from Detroit. When we get far enough along to use in the Australian Electric Trade methods as efficient as those of the Association of Electragists, International, in America, we shall have an Australian contractor or two running across to see Mr. Miller on his native heath."

Manufacturer Takes All-Metal Idea to Public



For the first time in the history of the All-Metal movement a manufacturer carried the message of All-Metal safety to the public when the American Metal Moulding Co., Irvington, N. J., prepared an exhibit at the Irvington Industrial Fair, held there from April 13-18.

The booth showed the use of All-Metal wiring with a motion-picture thrown on a screen at the front of the booth.

Of particular interest were two dis-

play boards showing how four-conductor armored cable can be used. Board No. 1 represented a two-family installation using No. 12 wire for riser into distribution box. No. 14 four-conductor feeds one three-way and also a single pole switch. Service and ground connections were also shown.

Board No. 2 represented an underground installation having service switch and meter device. No. 14 four-conductor feeds a three-way switch.

Estimating for Electrical Contractors

Lesson No. 5—Supervision, Non-Productive Labor and Job Expense

By ARTHUR L. ABBOTT
Technical Director, Association of Electragists

In the first four lessons of this series we have discussed the methods of arriving at the material cost and the cost of the corresponding labor on what we have termed the Standard Rigid Pipe Job. The methods and data applying to the so-called standard job form the ground-work for estimating all of the larger class of work. In order that the student may now proceed with confidence to apply the methods and data in making complete estimates, we will in this lesson discuss certain additional items of job cost which must always be included.

Besides the cost of the material which forms a part of the finished job and the labor for installing this material, the total prime cost of a job always includes the cost of supervision, non-productive labor, and job expense.

No one disputes the fact that these items enter into the cost of every job, but there has been some difference of opinion as to the best method of handling these items in making an estimate. This has been chiefly due to a lack of

This is the fifth lesson in Mr. Abbott's Course in Estimating. The course started in the January issue and the first four articles concerned, respectively, the method of laying out a job preparatory to taking off quantities, the systematic method of taking off quantities, labor on branch circuit conduit work and labor on large pipe, wire, panelboards and cabinets.

—The Editor.

definitions of the three items.

There may be room for some argument as to the classification of certain items of cost under these three heads which would be proper from an accounting standpoint. While such an argument might be interesting it would be of no value to the estimator. Our object should be to make a classification which will be clearly understood by the estimator and which will enable us to arrive at a simple and accurate method of including these costs in the estimate.

None of these items are in any way a part of the contractor's overhead expense; they are a part of the direct cost of each job, and should be included in the job cost records.

It should be carefully noted that the supervision which is here considered as a part of the direct job cost is the actual directing of the work by one or more of the men on the job, and not the general supervision of the work from the office by the contractor himself or by his engineer, estimator or general superintendent.

Practice is not entirely uniform in this respect. Some large contractors whose business is confined to large jobs require their general superintendents to distribute their time to the jobs in progress, and charge this time as part of the job cost. This of course effects some reduction of overhead. Some small contractors, on the other hand, make a practice of doing certain work themselves which is really productive labor.

In this case the true labor cost is not shown on the job cost record

SOLUTION OF PROBLEMS IN LESSON NO. 4

One and Two

	Table 1		Table 1-A		
	Unit Hours	Hours	Unit Hours	Hours	
Case 1.					
2" Conduit	46 ft.	5.9	2.71	18.2	8.37
2" Terminals	2	.88	1.76		
			4.47		8.37
Case 2.					
2" Conduit	46 ft.	5.9	2.71	18.2	8.37
2" Ls	1	2.52	2.52	2.8	2.8
2" Terminals	2	.88	1.76		
			6.99		11.17
Case 3.					
2" Conduit	46 ft.	5.9	2.71	18.2	8.37
2" Ls	2	2.52	2.04	2.8	5.6
2" Terminals	2	.88	1.76		
			9.51		13.97
Case 4.					
2" Conduit	46 ft.	5.9	2.71	18.2	8.37
2" Ls	2	2.52	2.04	2.8	5.6
2" Terminals	4	.88	3.52		
			11.27		13.97

Three

	Unit Hours		
	Conduit	Terminals	Bends
1"	70 ft.	3.1	2.17
1"	2	.38	.76
1"	2	.17	.34
1½"	120 ft.	4.1	4.92
1½"	4	1.57	6.28
1½"	6	.53	3.18
1½"	2	.43	.86
2"	100 ft.	5.9	5.90
2"	2	2.52	5.04
2"	6	.88	5.28
2½"	50 ft.	7.7	3.85
2½"	2	3.71	7.42
2½"	2	1.35	2.70
No. 8	Wire	205 ft.	7.2
	Runs	1	.5
No. 4	Wire	375 ft.	12.2
	Runs	3	.7
No. 0	Wire	330 ft.	18.7
	Runs (over 105 lbs.)	1	4.00
No. 3/0	Wire	165 ft.	22.6
	Runs	1	1.4
	Total		72.65

Four

As previously stated, the constant or preparation time will obviously be much less for a short run than for a long run. The limit between "short" and "long" runs is set at a length of wire which will weigh 150 lbs. This is an average figure, which may or may not be exactly correct in a particular case.

Using the data in Table 3, the values in Table 3-A are computed in this way.

150 ft. Run. Hours
No. 4/0— 150 ft. 25.1 Hrs. per M ft. 3.77
Run—less than 150 lbs. 1 1.6

Total 5.37

Hours per 1000 ft. = $5.37 \times \frac{1000}{150} = 35.6$

300 ft. Run. Hours
No. 4/0— 300 ft. 25.1 Hrs. per M ft. 7.53
Run—more than 150 lbs. 1 6.6

Total 14.13

Hours per 1000 ft. = $14.13 \times \frac{1000}{300} = 47.1$

and overhead is slightly increased. No fault can be found with either practice, except that in both cases, job costs and overhead must be adjusted before they are comparable with the corresponding figures arrived at by firms which follow the standard practice.

Confining our use of the term "supervision" then to the supervision exercised by the job foreman or the man on the job who is in charge, a careful consideration of actual conditions on the job seems to justify the conclusion that supervision requires about one-tenth of the total labor hours, and that this figure holds good regardless of the number of men on the job. Thus if there are 10 or 11 men on the job, it will require all of one man's time to properly supervise the others. If there are only 4 men, the total hours per day will be 32, and 3.2 hours per day will be a fair allowance for the time which the man in charge must spend in supervision and during which he can do no work with the tools.

The time required for supervision being an approximately constant percentage of the total labor, it can most easily be taken care of by adding the necessary percentage to all labor units or standard times. This allowance has been included in all the standard times given in this course, therefore no separate allowance need be made for this item.

While some jobs require more supervision than others, these differences are sufficiently covered by the "complexity" allowance included in the job factor applied to the branch circuit labor.

Non-Productive Labor

There are two items of non-productive labor on the ordinary job—lost time and handling material time. A third—travelling time—may enter into the cost of some jobs.

Lost time is time outside of travelling time during which men are doing no actual work but for which they are paid. This will include time spent waiting for materials, waiting for instructions, waiting for certain building operations to be completed, etc. The lost time item will also include an allowance for tearing out and replacing work which has been improperly installed, and going back to the job to correct errors or omissions.

Proper supervision, both on the job and from the office, will hold the lost

time down to a small percentage of the total labor except under unusual conditions.

All time spent in handling material as a separate operation is considered as non-productive labor. This will include unloading and checking materials, heavy tools and tool-boxes and transporting them to the locations where they are to be stored; transporting certain materials in quantities from the storage location to points where they will be convenient for use, as for example, conduit and outlet boxes; and collecting and loading surplus material for return to stock.

Transportation Time

The labor units which have been given, all include allowances for the time required to transport the materials to the locations where they are installed in the building, from the locations where the stock being used would normally be placed when the work is ready to proceed.

Thus conduit and outlet boxes would be originally stored in a store-room either outside of the building or on a lower floor. Before the installation work is ready to proceed on an upper floor, a sufficient supply for that floor is taken up and deposited at points where it will be convenient for use. Up to this point the labor is classed as non-productive; from here on the labor is productive and is all covered by the standard times.

Large wire on reels will usually be transported directly from the truck to some point on the ground floor of the building, this being non-productive labor. Moving the reels from here to the points from which the wire is pulled is considered as a part of the productive labor and is therefore included in the standard times.

Labor units on heavy apparatus such as motors, large starters, switchboards and transformers should include all time for unloading the apparatus and transporting it to its final location in the building; that is, all the labor should be considered as productive. This material is always special and the cost of unloading it and placing it in position can best be figured as a special item.

Data is lacking which will justify any but the most general conclusions as to the amount of handling material time and lost time on a given job. It is certain that the material handling time will

increase somewhat as the size of the job increases, due to the greater distance over which the material must be transported. The results obtained by using the following rule should be a reasonably close approximation:

Allow for handling material and lost time 3 percent of the total productive labor hours when this total is 1000 hours or less; for each additional 1000 hours increase the percentage on the total by 0.2 percent. In other words, allow 3 percent on 1000 hours or less, 3.2 percent on 2000 hours, 3.4 percent on 3000 hours, and so on.

The item of travelling time will appear only in cases where it is necessary to pay the workmen for time spent in travelling, either by railroad, street-car, or other means of conveyance. When this must be done, it is a simple matter to estimate the time which will be so spent.

Job Expense

The following are the more common job expense items, any or all of which may occur on any job amounting to a few thousand dollars or more: Bond, insurance, watchman, telephone, drawings, inspection, license, storage, freight, express and cartage, railroad fare, car fare, board and room. It may sometimes be necessary to include other items.

It is the better plan to consider public liability and workmen's compensation insurance as a part of the direct job cost, rather than to consider this as an overhead item. Consequently, the item of Insurance under Job Expense should include the percentage on the total labor cost which it may be necessary to allow for this cost.

The cost of nearly all of these items can be estimated quite accurately, and this should always be done. If a bond must be furnished, its exact cost can be determined. If a temporary storage building will be required, the approximate cost can readily be estimated. Permit or inspection fees can be computed accurately. If men must be sent out of town, or if an out-of-town job will require one or more inspections by some one from the office, the items of railroad fare, board and lodging may amount to considerable and the proper allowance should be made in the estimate. There is no more excuse for guessing at the amount of job expense than there is for guessing at the cost of material items.

the cards in card index, and forget it.

After this system is once in operation it requires but very little time or attention to keep it in order; a few rules are all that are necessary to observe.

File a catalog as soon as you decide that you want to keep it. Do not let it lay around.

Always put a catalog back as soon as you are through with it and in its proper place; carelessness in this respect will soon make the system of no value.

Clean out the file once a year, destroying obsolete matter, assigning the numbers to new matter.

In the larger offices a girl can be instructed in the use of the system, and it should be a part of her duties to keep it up, but about 90 percent of the contractors in the country would do better to let the estimator or engineer keep it up, as their organizations are small, and they will get much better results. No one has as much interest in catalogs as the estimator. I have tried to have girls keep up mine, but the results were not anything to brag about, and as it only takes about 30 minutes a week of my time I attend to it myself.

System Expands Easily

The nice thing about a system of this sort is that it can be amplified, or expanded to suit a variety of purposes. For instance, we do a lot of industrial power work. I frequently run across a story in some technical magazine relating to some particular phase of this work. I may not have any particular application at the time, so I cut out the article and slip it into a loose leaf binder, and use a card similar to No. 1 for my reference. I have built up quite a library in that way.

In the case of small (6 by 4) folders they are too small and too much trouble to try and index. If I want to keep them I just drop them in one of the smaller drawers which I keep for that purpose. But sometimes the concern issuing these folders have a general catalog. In that case I just drop them between the leaves of the bigger catalog.

I find that I have spent more time this morning writing this description of the system than I have spent on the system itself within the last year, but if some one benefits by it I am satisfied.

I do not believe that there is any one thing in our place that gives me so much satisfaction and comfort as this filing system.

Simple System Replaces Cumber-some Card Index

Wm. J. Wheeler, The Maintenance Co., New York.

We have established a very simple system for the filing of wiring department catalogs. This system replaces a cumbersome card index system which we abandoned.

Large stiff cover catalogs are stood on end on a shelf; other small catalogs, pamphlets, price sheets, etc., are filed horizontally in an old Amberg filing unit under the following classifications:

1. Fixtures, glass-ware, and fixture parts.
2. Panel boards, switches, and fuses.
3. Conduit and conduit fittings.
4. Wiring devices (sockets, switches, etc.)
5. Telephone and signal systems.
6. High tension materials.
7. Ventilation.
8. Motors and controllers.
9. Rules and regulations.

Steel Cabinets Indexed According to Manufacturer

F. E. Good, F. A. Clegg & Co., Louisville, Kentucky.

During the time that we have been handling catalogs for purposes of estimating we have had considerable experience with several different systems for filing catalogs, small pamphlets, price sheets, etc. The last system, however, has proven the most satisfactory of any that we have tried.

We now use sections of steel filing cabinets with heavy card board tabs (similar to those used in the Association's Data Book, except that they are very much heavier) arranged in alphabetical order. The catalogs, pamphlets, price sheets, etc., are then filed alphabetically, according to the manufacturer's name and not according to products manufactured.

We have found this system to be not only a handy and get-atable system, but it serves to keep the catalogs and other printed matter clean and free from dust and dirt.

You, of course, understand that this system of filing will not accommodate heavy volumes similar to the general catalogs issued by Westinghouse, Western Electric Company, General Electric and others. These publications are usually limited in number and these are placed in a separate compartment of the filing cabinet, loose, without any particular reference to their location in the file itself.

Since we have adopted this system we have had quite a number of visitors to our office comment upon the efficiency of the method with the result that a number of them have adopted the same system.

Files Large Catalog Separately

George H. Smith, Smith Electric Co., Bloomington, Ind.

My method of filing of catalogs and small pamphlets is very satisfactory for my requirements, although I do not know whether you would call it a system or not.

On the right of my desk I have an open front book case with a total of about 10 feet of shelf space. It is here that I keep all large catalogs with paste board or cloth binding. In this book case I also keep paper bound catalogs to which I frequently refer.

To the left of my desk I have a filing cabinet. In one 11 x 8½ in. drawer I file all paper covered catalogs and pamphlets, alphabetically by the name of the company or by name of the product in case the company is not well known to me. In this same filing cabinet I have an 8 x 5 in. drawer in which I file alphabetically the price sheets and small pamphlets.

So, you see, the material for which I may be looking might be in one of these three places and in the event that I do not recall the size of the catalog or pamphlet for which I am looking I may sometimes have to look in all three places. However, I soon learn the location of the things I look for frequently.

As I stated before, this method is very satisfactory to me but I would not be so sure of its merit if it were necessary for a half dozen people to refer to the catalogs and pamphlets very often.

If I were to construct my files over I would have only two places. One, the book case for the large catalogs and books. The other, a filing drawer for all others in which case I would use manila folders in which to keep the price sheets and small pamphlets.

Numbered Bins and Indexes

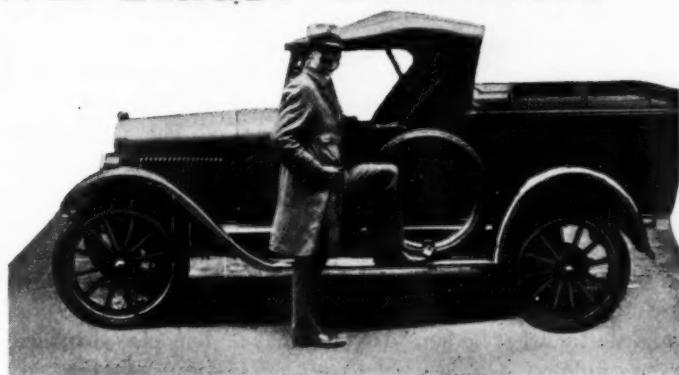
George Heath, The Electric Shop, Kansas City, Kansas.

Our system for filing small folders and catalogs is as follows—Two shelves 12 in. deep and 15 in. apart and separated by compo board partitions making

(Continued on page 27)

New York's Best Known Radio Retailers Base Their Success on Good Service

**Haynes-Griffin Have Discarded "Year's Guarantee" and Substituted Seven Day Trial
Plus Unusual Service Plan**



A Haynes-Griffin Service Wagon

IT is no news to the electrical dealer that his best bet in the radio end of his business is "Service," spelled with a capital "S." The manufacturer and jobber dins it into his ears from one side and the customer demands it loudly from the other. But there are all sorts of service, from the kind that salaams before the customer and declares him always right—no matter what it costs—to the kind that pinches nickels to the great detriment of future business.

The wise dealer, therefore, is in search of a middle road of service, the sort that will thoroughly satisfy the reasonable customer and at the same time not dig too deeply into profits. To this dealer the resume of the experience and present policy of Haynes-Griffin, Inc., will be of interest and value, for Haynes-Griffin have built up in Chicago and New York two of the largest retail radio businesses in the world, and they ascribe their success mainly to their service policy and practice.

Two years ago the company was just getting a start. They knew they would have to give service if they wanted to succeed but they had no service compass to steer by and they were headed through an, as yet, uncharted sea of business. Accordingly they did the thing that seemed most logical then—they guaranteed every set they sold for a period of one year from all mechanical and electrical defects. On the surface, this appeared a safe thing to do, but they ran into trouble immediately.

In the first place a radio set was treated differently by its user than a vacuum cleaner or a washing machine would be. The owner usually spent a lot of time tinkering with it. The set would go dead and the owner who would ad-

mit that it was his own fault was as rare as the dodo. It was usually ascribed to some inherent defect of the set, which always meant a demand that the company live up to its guarantee.

This policy endured for about a year, and more and more complications ensued, until the company decided on a bold and radical step. It would issue

installed. This money is not returnable even though the customer finally decides he does not want a set at all. In this way the company does not lose on the time and labor necessary to make an installation. The system has worked out well, mainly because the company has so studied the New York field that most of the installations it advises stick and the percentage of returns is small.

This study of the field is an accomplishment in itself. Through its long months of experience the company has accumulated considerable data on what types of installations work best in various parts of the city and surrounding territory. When a customer wants to buy a set which the company knows will not work well in the location where it is to be installed, the salesmen are frank to admit it will not work there and if the customer still insists on buying that set the seven-day trial privilege is rescinded.

Even in the case of portable superheterodyne sets where the only work connected with the installation is delivering the set and putting it in the living room, an installation charge of \$10 is made. Some buyers kick about this charge, but the company has succeeded in maintaining it by explaining that if the customer sends the set back the overhead on delivery and the cost of refinishing the cabinet are enough to absorb the installation charge. In addition, it is refunded, if the set is kept beyond the trial period.

The average cost of installing a set, according to the figures the company has worked out from its thousands of installations, is around \$18, so that the \$15 charge does not quite cover the cost. But it does protect the company against people who would take advantage of the seven-day trial to use a set



The "Service Exclusively" Counter in the Rear of the Store

no more written guarantees for any period whatsoever. In the place of the guarantee, a seven-day trial policy was instituted. This meant that the customer could pick out any set he liked, try it out for seven days and, if before the end of that period he did not like it, could return it and have another set installed. Under this policy there is no limit to the number of sets that a customer can try out, provided he returns each one before the end of the seven-day trial period.

The company, however, safeguards itself by making an installation charge of fifteen dollars when the first set is

for just short of a week for nothing.

No attempt is made by the company to evade responsibility for defects in its goods, but the guarantee is verbal. That is, the salesman assures the customer at the time the set is sold that all mechanical and electrical defects will be remedied for a period of one year and the company lives up to the letter of its word. But the absence of a written guarantee enables the service men to use their judgment more as to what is the fault of the set and what the fault of the user, and the user is less inclined to battle for what he considers his guarantee rights.

A new idea in the service line is embodied in the Service Bureau recently

trouble, holding at his disposal an efficient service man whose services are immediately available between 8:30 a.m. and 5:30 p.m. daily.

6. Supplying of all accessories to him at a discount of ten percent from their regular retail price.

These privileges, of course, can be abused by members if they insist on having service two or three times a week and in these cases their money is returned with a polite note to the effect that the company seems unable to satisfy them and would prefer to let someone else do the job. These cases have been very few so far.

So far the Bureau has not been able to pay for itself, but the loss can well

cerning their sets, various hook-ups, testing their hook-ups, testing tubes, etc. He spends at least two hours every day answering technical queries from correspondents. He is not allowed to sell any materials and the work is remunerative to the company only through the creation of good will. That it does enough of this is testified to by the fact that the company has maintained the counter for many months and considers it one of its most valuable assets.

A tube-tester, designed and built by the company, is situated behind the service counter and here the radio user can have his tubes tested gratis. The company also uses the tester to check up on all tubes that it sells and in this way no defective tube ever is sold.

The service corps of Haynes-Griffin is composed of men of a very high type. The company considers them its super-salesmen and has spared no pains in getting the right kind of men. The present force of seven men was winnowed from over three hundred who have worked for the company at various times.

Service Men Ambassadors

Four of them work from cars, the other three on foot. Each carries with him all the tools and materials he needs to fix sets out on the job. (This kit was described in last month's ELECTRAGIST.) Each man, when out on the job, is given to understand that he is the ambassador of the company and must be fair both to the customer and to the company.

For this reason the company leaves it up to the judgment of the man whether or not he shall charge the materials and labor to a customer or whether he shall insist upon receiving payment upon completion of the work. Oftentimes, when it is a question of leaving thirty or forty dollars worth of tubes with a customer, the service man must do some quick and accurate estimating of the customer's character and circumstances.

The average charge for service, however, is only about \$1.50 and if the customer cannot pay at the moment or there is only a servant in the house, the service man notifies the office to send a bill for the work. If this is not paid, then a black signal is put on that customer's card in the company's files and he is refused further service.

The service man carries with him a receipt book in which is a pink customer's job ticket. When the work is finished the service man obtains, if at all possible, the signature of the customer

INSTALLATION		RECORD OF MATERIALS		No. 5051	
Customer: Torrington, O.M. Freed Eisemann		Address: 620 West 149th St.		City: New York City	
Operator: Work begun:		Completed:			
Date:	Color:	Quantity:	MATERIAL SHIPPED:	Received by:	Remainder for:
4/6/25	5051	3	C-301-A's	Service Card	Chgs. FL
Date of Charge: 4/6/25		ROUTE: Service Car		Total: \$0.00	
HAYNES-GRIFFIN RADIO SERVICE, INC. 620 West 149th St. New York City					
JOB ORDER					
Customer: O.M. Torrington Address: 620 West 149th St.					
Comments:					
ITEM:	MATERIAL USED:	COST:			
1	C-301-A's	6.00			
Total Computed To My Satisfaction Signature: O.M. Torrington					
Take 301-A Tubes					
MATERIALS ISSUED OR RETURNED TO STOCK					
ITEM:	MATERIAL:	COST:	LABOR:	EXPENSE:	TOTAL:
1	301-A tubes	\$6.00	\$3.00		\$9.00
OPERATOR: DATE: TIME: FARE: MILEAGE: W.I.P. #5A 4/6/25 7:15-7:45					
Lumber Tax: 4/6/25 2 lbs. 5¢ W.I.P. #5A 4/6/25 7:15-7:45					
Set seems to be very sharp on above station. Repair required. Estimate cost 3 C-301 tubes					
TOTAL: \$9.00					
MATERIALS ISSUED OR RETURNED TO STOCK					
ITEM:	MATERIAL:	COST:	LABOR:	EXPENSE:	TOTAL:
1	301-A tubes	\$6.00	\$3.00		\$9.00
Kinds of Dwelling: Apartment House: Loop: Floor: E 13 6-Story elevator apartment steel construction					
Approved for Billing: K.D. Sales Order No. 5051					

Service Department Forms

- A.—This card shows all materials issued to each job.
- B.—On the back of card A are noted materials returned and type of installation.
- C.—This form shows work done and is used also to obtain receipt from customer.
- D.—Card D gives a job-to-job record of all work done for the customer.

be absorbed in the item of good advertising through good will. As soon as from eight hundred to a thousand members are obtained it will, however, be on a self-sustaining basis, due to the possibility then of laying out routes for each service man so that he can service from twenty-five to thirty sets a day. This is particularly possible in New York City where the company often has from ten to fifteen installations in a single apartment building.

This outside service is supplemented in the store by a special service counter, a photograph of which is shown.

A highly-skilled technician is stationed at this counter and his job consists entirely of advising users con-

cerned by Haynes-Griffin. For a ten-dollar fee yearly a member of the Bureau is entitled to the following service:

1. A guarantee to keep his radio in efficient operating condition at all times.
2. A complete inspection of his equipment at least once every thirty days, this including a thorough test of set, batteries, tubes and accessories.
3. Notification to him in advance when batteries and tubes should be replaced with new ones.
4. Free delivery to his home of all new batteries, tubes, etc., and repairs made without taking the set from his home.
5. If at any time between monthly inspections, his radio set develops

to this ticket, certifying that the work has been done satisfactorily. This is evidence which comes in handy if the customer complains about the work.

One of the rules of the company is that when a customer telephones in for a service man, no definite time for his arrival is promised. The assurance is given that he will be there as soon as possible. Usually a man can be got there within a half hour or so, but in case there should be any delay the customer has no grounds for dissatisfaction about tardy arrivals. Each man telephones the office after completing each job and if an emergency call has come in from his territory he is instructed to answer it at once.

An interesting sidelight on the type of men employed by Haynes-Griffin is their universal refusal to ride on the service elevator as though they were workmen. This has given the company's service a proper dignity.

Service Department Forms

The whole service layout of the company is built around a simple but efficient filing system. There are four forms in the system, all of them being shown herewith. As each service call comes in, the card of that customer is examined. This shows the type of work last done on the set and the date it was done. From this and from the description of the trouble given by the customer, the service superintendent can guess pretty accurately the present trouble and the materials that will have to be used to correct it. These materials and the instructions to the service man are noted on the "Job Order" given to him when he leaves for the job. When he has finished the work he fills in this form as illustrated.

In addition to these forms, there is another, the front and back of which are shown. This record of materials affords a check on materials issued to the service man, and he must receipt for all materials he receives by initialing the column opposite their listing. On the back of this form is a space for materials returned. For all materials not returned the service man must show either a charge or C. O. D. ticket or the cash.

For his kit of tools the service man must receipt a material record, which is made out only once. Periodically his kit is checked against the record and it is up to him to replace at his personal expense all tools he cannot account for properly.

How to File Catalogs

(Continued from page 24)

3 in. pigeon holes, each numbered. Fixture catalogs are in one bin, switches in another, motors another, heating appliances, etc. Each catalog or folder is filed under the appliance name, and a sticker having the bin number is attached to it. We also use two indexes, one giving manufacturer's name and one giving the kind of apparatus thus: Condulet catalog is filed in bin No. 12 listed in alphabet index under condulets No. 12, in index as Crouse-Hinds No. 12. A sticker on the cover bears No. 12, thus showing it is to be replaced in bin No. 12. Also in this bin are, V V Catalogs, Spraglets, Unilet, etc. Thus all conduit fittings, boxes, etc., are together.

Numbers and Indexes Each Catalog

Ernest Freeman, Freeman-Sweet Co., Chicago, Ill.

We number each catalog and pamphlet in the upper right hand corner, using a small gummed sticker for the purpose. These we list in index book (A. B. C., etc.) and the manufacturer's or jobber's name to correspond with number on catalog or pamphlet.

Finally we cross-index in the book goods manufactured as follows:

W.—Westinghouse Electric & Manufacturing Co. —10

T.—Transformers —10

M.—Motors —10

We find this plan works very satisfactorily.

Cabinet With 12 Drawers

L. P. Cody, Grand Rapids Electric Co., Grand Rapids, Mich.

For filing small catalogs, pamphlets, price sheets, etc., we are using small shallow drawers about 12 in. x 14 in. x 1 1/4 in. deep, made up in cabinets of twelve drawers. We have used these many years and they seem to be very convenient.

The cabinets are made by the Macey Company of Grand Rapids, Mich.

Classified Under Seven Headings

Martin H. Offinger, Van Wagoner-Linn Construction Co., New York City.

Some years ago we purchased the building in which our office is now located and we use the second floor for estimating and designing. When we took over this building which was an old residence, we found it necessary to

remove many of the partitions and different kinds of cupboards. On the second floor, however, we left one of these cupboards which is made up of a number of shelves with six large drawers underneath. These shelves are closed up by doors which completely cover them. On these shelves we have arranged in seven sections the various catalogs pertaining to our work.

The idea of the seven sections is to classify catalogs. For instance, in section 1 will be found everything pertaining to conduit and conduit fittings; section 2, switches and receptacles; section 3, fixtures; section 4, control apparatus; section 5, switchboard and panel board catalogs; section 6, tools; section 7, miscellaneous.

Each catalog, as it comes in, takes one of these numbers so that it is always replaced in its proper section.

In addition it is cross indexed, i. e., the name of the manufacturer is indexed, also the articles of his manufacture.

All pamphlets and circulars are kept in a vertical file classified merely under the make of the article described and whenever access is made to any of these files, duplicate or obsolete items are rejected.

Uses Bookcase

Henry Venino, Venino Brothers & Co., Newark, N. J.

I have a book case where I keep what catalogs and price sheets we need. On motors and parts of same I have several Rand Revolving Visible Card Indexes and each card has the full data of the machine. When sold it is taken out and filed away.

Standard Size Filing Cabinets Used

A. Kahn, Blumenthal-Kahn Electric Co., Baltimore, Md.

We use the standard size filing cabinets, and put each catalog in a separate folder in alphabetical order.

Uses Card Index and Numbered Folders

W. W. Thompson, Hixon Electric Co., Boston, Mass.

We have what is known as the vertical filing system. The folders are numbered and a card index referring to the names of the catalogs is kept. These cards designate the folder of the file in which each catalog is kept.

Radio Service Hints

Antenna "Dont's"

Some useful "don'ts" for the installation of antennas have been compiled by C. V. Pursell, of Station WEEI. They might be useful to place in the hands of your customers. The list is:

"Don't run an antenna over or under any other wires carrying an electric current of any sort, whether these wires be high tension, service or telephone lines.

"Don't attach antenna to any pole or tower to which other wires are attached.

"Don't run an antenna over or across any public highway.

"Don't attach an antenna to any electric light, telephone or telegraph pole even though no other wires are attached thereto. If using an outside antenna always comply with the regulations governing the installation of an approved lightning arrester.

"Don't borrow a neighbor's antenna by attaching a lead-in to the far end of his wire.

"Don't attach your antenna to a kite.

"Don't use your telephone wire for an antenna. Connection to an electric light socket is not encouraged, unless an approved condenser is employed to make the connection.

"Results can generally be obtained from an inside antenna if the necessary precautions cannot be taken in the installation of the usual outdoor aerial. It is far better to sacrifice a little signal strength and distance reception than to take too much for granted and get into trouble."

Using the Set as a Divining Rod

Oftentimes the service man knows that noises in a radio set are caused by sparking of some device or leaking of a power line. The next thing to do is to find the location of the source of the trouble and in that task the use of a set connected with a loop antenna is of great value as a sort of divining rod. When the loop points in the direction of the center of disturbance the noise will be loudest, and by moving the set in that direction, the noise will continue to get louder. The trouble is usually not very far from the installation and get-

The day of the radio fan is fast going by and the great public with no knowledge of radio or desire to know is buying sets. This is increasing the need for service and as a service to the electrical contractor this department is started. Here will be found each month a few short hints on trouble detection, prevention and removal.—The Editor.

ting the direction with the loop will help considerably to locate it.

Too Much "B" Voltage

Another disease to which tubes fall easy victims is too much "B" voltage.

Every standard tube carries with it a sheet which gives proper filament and plate voltages with other operating data. No error can be made in following this data and impressing it on the customer, as the makers of the tube are manifestly interested in having that tube produce maximum results.

There is a general tendency to add B battery to audio amplifiers to increase volume. This is all right as long as the plate voltage is carried no higher than the makers of the tube specify as the maximum permitted.

Mysterious Microphonics

Microphonics in a radio set are annoying and are caused in many ways, but there is one source that has mystified even some service men, but which may be overcome by the expenditure of about ten cents. If a loud speaker is placed on top of or near the set the vibration of the speaker causes the elements in the tubes to vibrate too. When the tube elements vibrate, noises emanate from the loud speaker. These are usually irregular, although in some cases a steady howl is produced.

This can be overcome by taking a large rubber sponge, cutting it into four pieces and placing one piece under each corner of the radio cabinet, so that the set is resting on the rubber sponges. These absorb the vibrations that are caused by the loud speaker. Incident-

ally this will prevent microphonic noises due to other sources, such as vibrating floors, etc.

Suspect and Inspect Aerials Now

The advent of spring should mean to the radio retailer a chance to render his customers service by suggesting that they permit him to inspect their aerials. The high winds and changing temperatures of winter may have left slack guys, unraveled rope ends, slanting poles and a generally make-shift appearance and performance. Then, too, all unsoldered contacts should be untwisted, cleaned of the accumulations of dirt and resoldered and taped. Insulators should be wiped clean of soot and one more inserted at each end of the aerial making two in series. The lead-in should be guyed away from the side of the building at least three feet, otherwise much of the energy picked up by the aerial will be dissipated into walls, and where the aerial enters the building, it should be led through a rubber tube or one of porcelain. Appearance of the aerial can be helped much by taking a can of white paint, giving the pole a once-over and also painting the spreaders if the aerial has more than one wire.

The external appearance of these parts of a set do not have a great deal to do with the performance but your desire to have everything shipshape will go a long way toward convincing the customer you are the man he wants to take care of his pet set.

Sell Them Voltmeters

When a customer is constantly burning out tubes the service man who has a respect for his customer's pocketbook should impart his suspicion that the tubes are being burned too high. Brilliance is no index of their operating point and its use as a guide will invariably result in them being burned too high. Here is a chance to sell the customer a voltmeter which will pay for itself in a short while by preventing the burning out of the tubes. Or else the customer should be advised to turn down the rheostat to the point where it begins to cut the signal strength.

What It Costs to Retail in Other Industries

By H. H. STINSON
Associate Editor, The Electragist

IN commenting upon the desire of electrical contractor-dealers for a larger margin on which to operate the merchandising end of their business, manufacturers and jobbers have brought the accusation that the electrical merchant is not as good a business man as retailers in other lines. This charge, very general in its nature, is hard either to prove or disprove because there are so few stores retailing electrical merchandise exclusively.

It has been estimated that of the many thousands of stores selling electrical

for other retail businesses as they are given in the tables which are shown in Table 2. According to bare figures the operating expenses of the contractor-dealer are very much in line with most other retail businesses; and, the manufacturer wants to know, why should not the contractor-dealer be able to obtain a profit as well as other retailers can? But the catch lies in the fact that the figures for the electrical field include both contracting and merchandising activities. Now an economically-operated contracting business will have an overhead much smaller than almost any merchandising business. A fair average is around 20 percent, while the operating expenses of the merchandising end probably run well over 30 percent.

If the contractor-dealer can make some profit on his business, even with one part of it running an operating expense higher than other retail lines, it would seem that he is a good business man, at least insofar as making a living under adverse conditions is considered.

Direct comparison of electrical store

figures with those of other businesses is not possible because of the dual nature of the former. But it will be interesting to see below that even with the handicaps the electrical merchant is burdened with, the percentages do not show him to disadvantage as a business man. They do indicate that in order to render his community a service he is maintaining the merchandising end at the expense of the contracting.

Assuming that operating expenses for the merchandising end of an electrical store doing a total business of \$50,000 yearly, half of that being merchandising, run between 30 and 31 percent, it will be seen that this figure is higher than the same figure in any other field except jewelry. Discounts given to electrical retailers of this size run usually little higher than 30 percent and there is left a very meager margin.

It is different in these other fields, for in each one gross margin exceeds operating expense by a sometimes generous, sometimes small, though positive, amount.

TABLE 1—OPERATING EXPENSE AVERAGES FOR ELECTRICAL CONTRACTOR-DEALERS

Non-Productive Labor.....	4.23
Salaries	8.48
Rent.....	1.51
Light, Heat and Power.....	.34
Postage, Telephone and Telegraph.....	.43
Advertising.....	1.01
Depreciation.....	.65
Stationery and Printing.....	.41
Incoming Freight and Express.....	.58
Delivery Expense.....	.88
Insurance.....	.62
Taxes43
Bad Debts and Allowances.....	.72
Association Dues.....	.13
Maintenance.....	.68
Interest56
Miscellaneous.....	1.97
Total.....	23.63%

merchandise considerably less than 500 of them handle it as anything other than an adjunct to a major line of goods. With so few establishments in the field it is almost impossible to obtain reliable figures on operating expenses for stores selling such goods exclusively. Without figures the accusation remains a mere matter of opinion.

However, figures are available for stores doing a combined electrical contracting and merchandising business. These figures, which appear in Table 1 herewith show total operating expenses of 23.63 percent.

"Fair enough," says the manufacturer when comparing these figures with those

TABLE 2—AVERAGE OPERATING EXPENSES IN FIVE RETAIL FIELDS

	Net Sales = 100%				
	*Hardware \$40,000 to \$60,000 sales yearly	†Shoes (1923)	†Jewelry (1923)	†Groceries (1923)	†Drugs (1923)
Total Salaries and Wages	12.17%	14.7%	17.1%	10.6%	15.6%
Advertising	0.79	2.2	2.8	0.3	0.7
Boxes and Wrapping	0.18	0.2	1.1	0.6	0.6
Delivery	0.85	0.25	0.35	1.2	0.1
Supplies, Postage, Telephone and Telegraph	0.52	0.4	0.6	0.15	0.3
Rent	2.21	3.5	4.5	1.3	2.8
Heat, Light, Power and Water	0.49	0.6	0.85	0.3	0.8
Taxes	0.91	0.5	1.0	0.2	0.4
Insurance	0.60	0.5	0.6	0.15	0.4
Repairs of Equipment	0.12	0.2	0.25	0.1	0.2
Depreciation of Equipment	0.62	0.4	0.75	0.3	0.6
Interest	0.64	2.7	4.6	1.0	3.1
Collections	0.06				
Donations	0.15				
Miscellaneous Expenses	0.52	1.0	1.5	0.7	1.5
Losses from Bad Debts	0.86	0.2	0.4	0.35	0.3
Total Expense	21.69	27.4	36.4	17.3	27.6
Gross Margin	24.03	29.1	38.3	19.1	34.0
Net	2.34	1.7	1.9	1.8	6.4
Stock turn (times a year)	2.14	1.9	0.9	10.1	2.3

† Figures obtained from Harvard Bureau of Business Research.

* Figures obtained from U. S. Chamber of Commerce.

Turnover does not seem to exercise so great an influence as is generally believed. In the jewelry business which has the smallest stock turn, 0.9 times per year, the net profit is greater in percentage than that in the grocery trade which had a stock turn of 10.1 times.

Until the contractor-dealer knows definitely what it costs him to merchandise he will be in the unenviable position of having comparisons made with figures such as are here shown.

However work is under way, under the direction of the Association of Electragists, International, on a method which will enable contractor-dealers to allocate their operating expenses for both the contracting and merchandising ends of their business.

Results obtained so far show an operating expense for merchandising in excess of that for any other business mentioned here, with the exception of

jewelry as before noted. This is due to operating expense items inherent to many articles of electrical merchandise, such as washers, ironers, vacuum cleaners and other articles of high price. Stock turn here is slow, each sale carries an obligation of expensive service given free, and a great percentage of the business is done on the time payment plan.

Once definite figures are secured the contractor-dealer will be in a position to find out how to merchandise profitably. It may be that margins will have to be increased or it may be that free service will have to be abandoned.

At that time the industry will have an opportunity to know just how expensive merchandising of electrical goods is, to determine just how necessary electrical dealers are to the merchandising of that class of goods and then to determine what margin will be necessary to handle this line at a profit.

This material offers the industry a splendid opportunity to mass its effort behind the selling of more electrical appliances as bridal gifts and as gifts for the Fourth Electrical Wedding Anniversary. Jewelers, florists and merchants in other lines take every advantage of a special occasion such as this and the electrical merchant should do all in his power to meet this competition.

All of the material will be ready for delivery the first week of May in plenty of time for most effective use in June.

The Use of Mechanics' Lien by Sub-Contractors

(Continued from page 18)

The New York plan is the most favored one, today, and is being adopted by most of the states.

A mechanic may accept a note for the amount due and may have the note discounted without losing his lien. But he should be careful to see that the date of maturity of the note is not beyond the last day set for the filing of his lien, for then if the note is not paid it is too late to secure the lien.

Another word of caution: be careful that your contract does not prohibit you from securing a mechanics' lien. Before undertaking a job, a man can agree not to file a lien against the property, in case the contract price is not paid. Many form contracts include such a provision—and every mechanic should be certain that he is not signing away his right to collect by means of a mechanics' lien. If the owner or contractor insists upon the clause, there is just cause for suspicion.

The chief value of the lien to the mechanic is the threat it holds over the owner's head. In practice he cannot sell his property until the lien is either paid or barred. Thus it subjects him to rapid foreclosure and permits all his creditors to jump in. Such a foreclosure usually precipitates a bankruptcy. Of this, a mechanic with a mechanics' lien need have no fear, for he is a preferred creditor and collects his debt from the proceeds of the sale of the property and not from the general fund established for creditors. But the owner should, and does, fear bankruptcy. And that makes the threat of the mechanics' lien even more effective.

In fact, many times a debt is collected merely by suggesting a mechanics' lien and most often the owner pays shortly after he is served with notice of the lien.

"June Bride" Opportunity Again Awaits Contractor-Dealers

THE opportunity of cashing-in on the annual wedding-gift wave is again being called to the attention of the electrical contractor-dealer by the Society for Electrical Development. The S. E. D. has prepared this year a finer than usual assortment of sales helps for the dealer in electrical appliances and these helps are ready earlier than they were last year, so no contractor-dealer will have an excuse for not getting his share of "June Bride" business.

The advertising and publicity material to focus public attention upon electrical gifts for the bride includes striking window display effects, newspaper advertising copy and literature for mailing.

There are eight different items in the assortment of material which the Society is offering in combination packages ranging from about \$50.00 to \$5.00 per package.

This year the Society is featuring a window display panel, 21½ in. x 31 in., the original for which was executed by one of the leading commercial artists. The reproduction will be in 10 colors, with heavy board backing and easel, for use in both window displays and interiors.

Other selling helps include a full size life-like, die cut, 5-color reproduction of a bride on heavy board with easel back;



The S. E. D. Supplies This Window Card
in 7 x 12 inch Size

an 8-page, 3-color envelope size gift suggestion folder; bride cutouts, 8 inches high; 2-color, 7 in. x 12 in. window card with selling message; advertising material consisting of advertising suggestions, proofs and mats, lantern slides and a sales manual containing suggestions on conducting a campaign including window display ideas and selling pointers.

Pangborne's Men Can't Say "I Didn't Know"

WHEN new men come into an organization there is always a certain amount of time lost learning how the new employer wants things done. A simple way out of this has been developed by W. V. Pangborne and Company of Philadelphia in a mimeographed set of rules and regulations for foremen and wiremen.

Now, when a new man comes to work, one of the first things he receives is a copy of these rules. He is told to familiarize himself with them just as soon as possible.

In discussing with Mr. Pangborne the value of these rules which are given below, he said that there was much less confusion with new men and fewer excuses by the men that they "didn't know" or "never were told." Now, when a man starts to give such an excuse, he is referred to his copy of the rules which follow:

1—Term

Where term Company is used it refers to W. V. Pangborne & Company.

2—Conduct

Attention is called to the fact that the foreman on the job is in direct contact with the customer and the company is judged by the way the foreman and men act and do their work.

3—Violation

Foreman or workmen shall not engage any customer's employee or other firm's workmen on our work in any conversation except business.

4—Class of Work

A first class job promptly executed is this company's best advertisement.

5—Working Time

Shall be such as decided from time to time by conference with all parties concerned. Be on the job promptly ready to work at starting time and work until stopping time. Violation of this is the reason for time clocks.

6—Overtime

There is to be no overtime unless ordered by the superintendent.

7—Stationery

The following stationery is on hand for the purpose of enabling us to conduct our business in a systematic way:

- Time Sheets.
- Labor Cost Sheets.
- Stamped Envelopes.
- Extra Work Slips.
- Yellow Material Slips.

Credit Slips. Box Drilling Sheet.

These sheets cost money and should be carefully kept in a heavy paper envelope furnished by the company and always carried with you.

8—Time Sheets

Attention is called to the fact that pay time sheets should be mailed not later than 7 P. M., Wednesday night. In the event this is not carried out you will not be paid until the following week. Wages are payable Friday and Saturday.

9—Contract Jobs

State on time sheets the job number, name of job, and address and mark if extra work or give a description of work on back of sheet.

10—T. & M. Jobs

On a time and material job we expect you to produce the same as on contract, but give a list each week of every change or item of work done, thus enabling us to put same on customer's bills.

11—Division of Time

Owing to the fact some work has been proven to be at a loss it is highly important that foreman and workmen keep office advised on cost of doing work. This will enable work to be figured at a price to enable men to have time to do the work right. Therefore fill out time sheets as listed below or special engineering reports when furnished.

12—Code

The following letters will be used in dividing time. Get this as accurate as possible.

BC—Branch Conduit $\frac{1}{2}$, $\frac{3}{4}$, 1 in.

BW—Branch Wiring 14, 12, 10.

FC—Feeder Conduit $1\frac{1}{2}$ to 4.

LP—Lighting Panels.

PP—Power Panels.

MS—Main Switchboard.

II—Installing Inserts.

SB—Work in Substation.

HM—Hanging or Setting Motors.

CM—Connecting Motors.

CR-S—Connecting Receptacles & Switches.

HF—Hanging Fixtures or Reflectors.

13—Starting Work

On starting work be sure you have a job sheet or number. Check all material sent and immediately order any material you require. Material is sent to job from sheets made out by the engineering department to purchasing department with copy for foreman. We try to order material as it is needed to insure a steady flow of material to the job.

Workmen applying their time on several jobs shall keep office advised of their whereabouts.

14—Material, etc.

You should receive copy of all orders placed for material. When material arrives from supplier, check and return delivery sheet with your order to shop. This is important.

When instructed by office get material and time sheets signed, material on delivery and

time daily. Return these sheets to shop each day. Don't order out rush or phone in material not required immediately as this runs our trucks ragged. Do not attempt to pick up material at jobbers without order from office.

15—Time and Material Jobs

When duplicate material sheets are sent out get them signed as soon as possible being careful not to lose track of same. Give one copy to customer.

16—Material Requests

Make out request for material on yellow sheet and order as soon as possible stating time of delivery. Only phone in emergency. Do not duplicate orders.

17—Tools

We have in shop proper tool boxes to safeguard tools and material. Foreman and workmen who continually lose material and tools according to our check will be discharged. Your attention is called to the abuse of valuable tools such as furnace torches, electric drills, etc. Do not use electric drills when a screw punch will do the work. Return tools not needed promptly to shop with credit. In the event you require special tools that will save time request them from the superintendent.

18—Charged Tools

Hacksaw blades, oil and drills are charged out as material.

19—Old Material

Return to shop all old material not required.

20—Credit

Make out proper credit for material and do not keep material on job you have no use for, as we can use same on other jobs. Give same with credit slip to superintendent or driver.

21—Plans and Specifications

Thoroughly read and digest both plans and specifications and do not install any extra work not shown on them, without getting an extra work slip signed or taking same up with the superintendent. Do not make any radical changes. Do not start work until you know exactly what is to be done. In connecting up apparatus you do not understand ask superintendent for detail drawing or information. When in doubt of interpretation of specifications and plans consult superintendent.

22—Phone

When calling the office use Keystone phone if possible. Let the superintendent know the phone number you can be reached on if we need you, also your home address and phone number; so copies of order to supplier can be sent.

23—Petty Cash

Give an itemized account of money spent for small items together with receipted bills and send in with time on Wednesday night.

24—Dissatisfaction

When customer is dissatisfied on account of type of work, quantity done, progress, etc., notify superintendent.

Acknowledgment Unnecessary

A general contractor whose financial standing was very shaky, a fact not generally known, took a contract to erect an office building for a speculative real estate firm. He awarded subcontracts for the electrical work and other work, the subcontracts specifying that payment would be made by him and not by the owner. When the building was partly finished he was thrown into bankruptcy. The subcontractors immediately received letters from the owner, signed by an authorized official and stating that payments for their subcontracts would be made by the owner if they would go ahead and finish their part of the work. The electrical contractor continued on the job and finished up, though through an oversight he failed to acknowledge the offer made by the owner. When he presented his bill the owner refused to pay it on the

ground that he had not acknowledged the offer contained in the letter and thereby there had been no agreement. The electragist accepted this decision and took his place among the creditors of the general contractor, though he undoubtedly would have been able to recover from the owner, this point having been decided thus in Virginia:

"Where the owner of a building under construction wrote the subcontractors and material men that by agreement with the general contractor money due them would be paid directly by the owner to them, no express acceptance of this offer was required, and where the subcontractors and material men in reliance thereon and within the time fixed by their respective contracts furnished material or labor, and permitted it to be utilized without delay or litigation or the assertion of a lien, the promise was thereby converted into a contract

obligation." — Richmond Engineering and Manufacturing Corporation v. Loth, 115 S. E. 774.

Radio Faking on Wane

Contractors and dealers who handle radio equipment and who have had unpleasant experiences with overstocked wholesalers, anxious to unload at the expense of the other fellow, will be interested to know that radio faking is on the wane, according to announcement by the N. Y. Better Business Bureau.

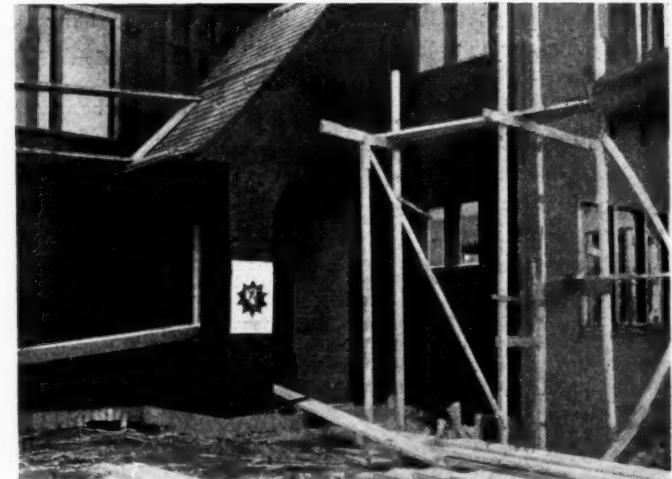
The article points out that the industry is outgrowing its infancy and leaders are establishing standards of selling practice. The radio press has been pleading with the wholesalers to protect the fair name of the industry, and a move on the part of local newspapers to scrutinize more closely radio advertising that might be deceptive, is looked on as a forward step.

First Red Seal Houses Now Under Construction

THE first houses in this country to be constructed under the Red Seal plan for adequate wiring as sponsored by the Society for Electric Development got under way last month, two in Rochester, N. Y., the third in Syracuse.

It is worthy of note, also, that two of the houses are being constructed for electrical men, who are thus backing up individually the doctrine they have been preaching collectively for the last year. The house shown in illustration No. 1 is the future home of Harry J. Morey, chief engineer of Pass & Seymour, Inc. That in illustration No. 2 is being built for H. M. Van Demark, an electrical jobber and a member of the Electrical League of Rochester.

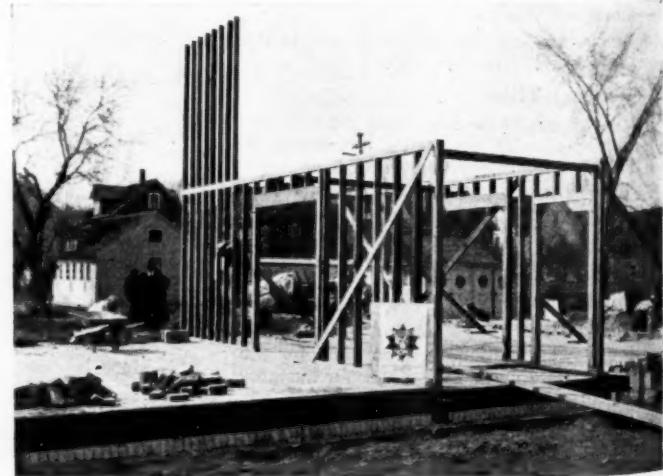
In the case of all three houses the builders have agreed to the installation of even more outlets than required by the minimum Red Seal standards.



1—There Are 74 Outlets in First Syracuse House



2—First Rochester House Nears Completion



3—Second Rochester House to Have 70 Outlets

R. M. Sutton, Wichita

R. M. Sutton of Wichita, Kan., president of the Kansas Association of Electragists, is a super-advocate of the electragist creed which he so aptly describes as a worthy, constructive movement for the advancement of the best interests of the contractor-dealer and the promotion of that spirit of great good will which makes better competitors of those engaged in rendering electrical service. Mr. Sutton was born and reared in Sedgwick County, Kansas. In 1898, when just a youngster, he entered the electrical field as an electrician's helper and followed the work on Saturdays and each day after school for a period of three years. He began at the screw driver and pliers end of the business and by sheer force of ambition and ability, has risen to the presidency and general management of the Southwestern Electrical Company, a Wichita corporation employing about fifty people and doing over a half million dollar business annually. Mr. Sutton says he has had "only one job in his business life." In the early days, he worked for a Wichita jobber. Later he became the jobber's manager. In 1913, the Southwestern Electrical Company was formed by Mr. Sutton and his associates, who purchased the jobber's retail and construction departments. The business then totaled only \$10,000 a year, and now reaches the half million dollar mark yearly. The company does a large electrical business all over the Southwest states, in addition to an extensive retail business in the Wichita trade territory. He is president of the Kansas Association of Electragists, and a member of the local Chamber of Commerce.



Electragists You Should Know

E. W. Weaver, Allentown

One of the most ambitious projects for local cooperation among electrical contractor-dealers is the Lehigh Valley Electrical Association which coordinates the activities of members in twelve towns in Pennsylvania and New Jersey. A prime mover in this work has been E. W. Weaver of Allentown, Pa. Mr. Weaver was born in Allentown in 1886 and obtained his education there. His first electrical job was as a telegraph operator assistant on a railroad. In 1904 he started with the Lehigh Electrical Company at \$1.50 per week. The following year he entered the employ of the Bell Telephone Company as a test table operator and later, became plant wire chief. Two years with the American Union Telephone Company at New Castle, Pa., followed this and then he went back to the Bell Company. Finally he decided to leave telephone work and returned to the employ of the Lehigh Electric Company. From the summer of 1918 to that of 1919 he was overseas with the Y. M. C. A. and when he returned decided to go into business for himself. He formed a partnership with W. M. Solliday, the company operating as the S. & W. Electric Shop. The company does both contracting and merchandising, and from the beginning of its existence has been a strong believer in and practitioner of electragist principles. Mr. Weaver is prominent in local and state association work. He had charge of advertising and publicity for the two electrical shows given by the Lehigh Valley organization and is now serving as the organization's president after having been its treasurer for several years. He is a member of the Pennsylvania State Association of Electrical Contractors & Dealers.



The Electragist

Official Journal of the
Association of Electragists—International

S. B. WILLIAMS
Editor

H. H. STINSON
Associate Editor

Job Management

The greatest loss in electrical contracting is the handling or management of the job. This is more true of large work than of small.

There are ways of saving material by studying the load requirements. On large work the layouts are frequently made by engineers, but even these in a large number of instances can be improved.

The greater opportunity for saving lies in labor management. With present wage rates one can very easily run up a large item of waste time.

The working day is short and every minute of it should be filled with productive labor. If the foreman on the job is to be permitted to lay out his work as he goes along there will be much idle time.

There is only one truly efficient manner and that is to have all the work laid out well in advance. Then the foreman will have before him at all times a definite schedule which he must meet. If he consistently falls down another foreman will take his place.

By laying out the work well in advance, materials, tools, etc., can be delivered to the job at the proper place in sufficient quantities.

When the work is not well laid out there is much lost time waiting for something to be delivered that was forgotten; or, if more than enough to carry on with for a reasonable time is sent to the job, there is a certain amount of breakage and loss.

Much of this economic loss can be prevented by proper job management.

Quality Wins

The first three homes in the United States to be sold on Red Seal wiring will be found pictured elsewhere in this issue. In glancing over the specification of each, one thing in particular was noticeable: Each one exceeded the Red Seal requirements.

It is not safe to prophesy, yet we cannot help feeling that in more than half the homes that will receive Red Seal certificates the minimum requirements will be exceeded.

To us this is not so much a revelation as a confirmation of the point of view so frequently expressed in these pages, namely that the public wants the best. To repeat what was said only a few months ago:

The public wants the same for less money, more for the

same money, but never less for less money. If it can't have these the public always takes more for more money.

There is no place for cheap wiring in the United States except in the minds of some short sighted central station men and misguided contractors.

There is all the room for quality work.

Inferiority Complex

There seems to be a feeling amongst many contractors that the public will not pay the price for wiring that will cover overhead and show a profit. They feel that instead of standing up for their rights and convincing the public that the price is right for that kind of a job and quality of workmanship, it is better to take the path of least resistance and cut the price.

These men are not sold on their own organization—they suffer, as the psychologists would say, from an inferiority complex.

Complexes are funny things and if a person suffers from one, especially the inferiority kind, he ought to be very careful. The best remedy is a large dose of self confidence.

Program Advertising

The following resolution has been adopted by the Board of Governors of the Electrical Board of Trade of New York, Inc.:

WHEREAS, our members are frequently solicited with a view to having them purchase advertising space in local programs, association organs, special editions and other publications issued by organizations not regularly engaged in the publishing business.

NOW, THEREFORE BE IT RESOLVED, that the Board of Governors of the Electrical Board of Trade of New York, Inc., is firmly opposed to advertising in such publications as an economic waste and unjustifiable charge against the cost of doing business, and directs that members shall govern themselves accordingly.

There is raised here one of the serious small problems of the electrical contractor and dealer—program advertising. In fact in many cases the church, fraternity, club, civic and

other local organization programs have taken all of the contractor's advertising money and returned little of value.

If such mediums had any real advertising value there would be much less room for complaint. The space is not purchased on its advertising value but because of the fear that "No" might result in the loss of goodwill and business.

It takes a certain amount of courage to say "No" to the wife of a good customer when she asks you to take an advertisement in the Ladies' Aid Dance Program. But then, only men with courage last in business.

Moreover, becoming a member of your local Chamber of Commerce, Board of Trade or other business organization, giving you a right to display a sign to the above effect is an investment worth while for this thing alone.

Free Service

There are certain electrical devices such as washing machines that seem to require a very large amount of service. When sold through an electrical channel the customer has come to expect this service free. Why?

One doesn't expect free service from the hardware store or drygoods store except by waiting a long time. If an electric appliance that is purchased at a non-electric store goes bad, you can take it back and the store will simply send it back to the factory and you wait.

The electrical store's customer wants service the same day.

Should this kind of service be rendered free? The manufacturer doesn't care apparently, or he would grant a preferential to take care of this item.

The public is accustomed in other trades, notably the automobile, to pay for service. Why shouldn't the electrical man charge also? He might just as well face the facts that if he doesn't charge, he will lose money on many lines.

Why not get the electrical dealers together and adopt a local service policy.

Make Them Partners

Two contractors, one doing about \$250,000 a year and the other about \$150,000, are fighting each other in a certain large Middle Western city. The smaller was employed by the larger up to seven years ago.

If these two concerns were together they could do not only all the combined business, but at a better price.

Why was the separation ever permitted?

This situation can be duplicated many times in almost every city. The old concern cannot see that the younger element is bound to get ahead.

The business the young fellows bring to the new concern they would bring to the old concern, provided there was the proper incentive.

Good men—men with ambition, initiative and ability—are scarce. They can make money for the firm and themselves if given a chance.

The older concerns should be quicker to offer these

capable fellows an interest in the business. It will build business for them and be a wonderful buffer against unfair competition.

Public Activities

Public good will can be created by taking part in local civic and fraternal affairs. We know one contractor who is mayor of his town, another who is chairman of the local Rotary Club, a number who have held the highest office in their fraternities, etc. All of these men have built for themselves a large local acquaintance amongst the worth while people.

Each one will tell you that he gets opportunities to do work that are directly traceable to this public activity.

This participating actively in public activities is to be encouraged but it should never be allowed to become so heavy that the business has to be neglected.

Itemize the Bill

When a customer receives a bill for \$6.27 for a little electrical work, and he goes up in smoke and calls you a robber and what not, because he doesn't remember that you put in a new socket, fixed the bell transformer, changed the back door bell and put on a new buzzer and perhaps one or two other things, whose fault is it? It didn't take the wireman very long, although he did do a lot of things.

The customer would have thought the bill very reasonable if all the things done were itemized.

Besides, he is entitled to know what he is being billed for.

Public Confidence

Gradually the public is coming to understand that the word Electragist means more than electrician. The name is seen more frequently on store windows, trucks, stationery, etc., and it is creating an impression of permanence and confidence.

Seemingly only the best electrical contractors and dealers use the name and the public naturally is accepting it as symbolic of the best.

We have no hesitancy in stating that the name is being accepted by the public and every contractor and dealer who enjoys the privilege of using the name Electragist should make full use of it.

It will create for them distinction, confidence, good will.

Anonymous Letters

Occasionally we get anonymous letters from readers and they place us at a great disadvantage. We cannot print them, we cannot acknowledge them. If they criticise us we cannot thank the writer if we are wrong or make explanation if we are right.

We like to get letters from our readers but they are meaningless unless we know who writes them.

Association of Electragists

INTERNATIONAL

PRESIDENT, Joseph A. Fowler
118 Monroe Ave., Memphis, Tenn.

EXECUTIVE COMMITTEEMEN

Eastern Division
W. Creighton Peet,
70 East 45th Street,
New York City

Southern Division
J. A. Fowler,
118 Monroe Avenue,
Memphis, Tenn.

Great Lakes Division
E. McCleary,
2470 Grand River Avenue, W.,
Detroit, Mich.

Central Division
A. Penn Denton,
512 South West Blvd.,
Kansas City, Mo.

Pacific Division
C. L. Chamblin
687 Mission Street
San Francisco, Calif.

AT LARGE
W. A. Jackson
37 West Van Buren St.
Chicago, Ill.

Mountain Division
E. C. Headrick,
87 Broadway,
Denver, Colorado

Eastern Canadian Division
R. A. L. Gray,
85 York Street,
Toronto, Ont.

Western Canadian Division
J. H. Schumacher,
187 Portage Avenue,
Winnipeg, Man.

Open Shop Section
J. F. Buchanan,
1904 Sansom Street,
Philadelphia

Union Shop Section
L. K. Comstock,
21 East 40th Street
New York City

SECRETARY AND TREASURER, Laurence W. Davis,
15 West 37th Street, New York City.

COMMITTEE CHAIRMEN

Architects and Engineers
(including Jurisdictional Awards)
E. McCleary
2470 Grand River W., Detroit, Mich.

Code
A. Penn Denton,
512 So. W. Blvd., Kansas City, Mo.

Conventions and Meetings
Joseph A. Fowler
118 Monroe Ave., Memphis, Tenn.

Cost Data
J. H. Schumacher
187 Portage Ave., Winnipeg, Man.

Credit and Accounting
J. F. Buchanan
1908 Sansom St., Philadelphia, Pa.

Electragists' Data Book
E. C. Headrick
87 Broadway, Denver, Colo.

Legislation
J. F. Buchanan
1904 Sansom St., Philadelphia, Pa.

International Relations
R. A. L. Gray
85 York St., Toronto, Can.

Membership
C. L. Chamblin
687 Mission St., San Francisco, Calif.

Publication
L. K. Comstock
21 East 40th St., New York City

Radio
E. C. Headrick
87 Broadway, Denver, Colo.

Standardization
W. A. Jackson
37 West Van Buren St., Chicago, Ill.

Trade Policy
W. Creighton Peet
70 E. 45th St., New York City

U. S. Chamber of Commerce
L. K. Comstock
21 E. 40th St., New York City

Past Presidents of the National Electrical Contractors' Association

Charles L. Eiditz.....	1901-1903	*Marshall L. Barnes.....	1910-1912	John R. Galloway.....	1914-1916
E. McCleary	1903-1905	Ernest Freeman	1912-1914	Robley S. Stearnes.....	1916-1918
James R. Strong.....	1905-1908	*Deceased		W. Creighton Peet..	1918-1920
Gerry M. Sanborn.....	1908-1910			James R. Strong.....	1920-1925

CHAIRMEN AND SECRETARIES OF STATE ORGANIZATIONS

State	Chairman	Secretary	State	Chairman	Secretary
British Columbia:	P. F. Letts 3044 Granville St., Vancouver	J. Hart 323 B. C. Elec. Bldg., Vancouver	Michigan:	W. F. Fowler c-o Barker-Fowler Electric Co., Lansing	E. P. Blackman c-o Motor Shop Battle Creek
Alabama:	J. R. Wilcox 313 N. 19th Street Birmingham	D. B. Clayton Am. Trust Bldg., Birmingham	Missouri:	A. J. Dunbar Frisco Bldg., St. Louis	G. E. Haarhaus St. Louis
California:	Victor Lemoge San Francisco	Walter F. Price 318 Call Bld., San Francisco	Mississippi:	W. J. Johnson Meridian	A. H. Jones McComb
Colorado:	W. A. J. Guscott 1100 California St., Denver	E. A. Scott 615 Fifteenth St., Denver	New Jersey:	Henry M. Desai Paterson	Robert Beller Newark
Connecticut:	N. B. Fitch New Haven	Wilbur M. Peck 264 Gr'nvich Av., Gr'nvich	New York:	C. C. Miller Oneonta	H. F. Janick 235 Berlin St., Rochester
Florida:	Preston Ayers Orlando	Charles E. James Fort Pierce	North Carolina:	N. L. Walker Raleigh	F. E. Robinson Charlotte
Indiana:	T. F. Hatfield 102 S. Meriden St., Indianapolis	A. L. Clifford 507 Odd F. Bldg., Indianapolis	Ohio:	C. L. Wells Akron	O. A. Robins 1517 Franklin Ave., Columbus
Iowa:	R. Honneger 516 W. 3rd St. Des Moines	C. E. Gourley Cedar Rapids	Pennsylvania:	F. Lloyd Smith 250 Wyoming Av., Scranton	M. G. Sellers 1202 Locust St., Philadelphia
Kansas:	R. M. Sutton 123 N. Market St., Wichita	Charles Dalrymple Wichita	Tennessee:	Emmett Scott 115 W. 7th Street, Chattanooga	J. A. Fowler 118 Monroe Ave., Memphis
Louisiana:	Robley S. Stearnes 24 Carondelet St., New Orleans	I. G. Marks 406 Mar. Bk. Bldg., New Orleans	Texas:	T. L. Farmer 1809 Main St., Dallas	J. W. Read 715 Capitol Ave., Houston
Maryland:	G. S. Robertson 417 Park Bk Bdg., Baltimore		Wisconsin:	L. W. Burch 202 E. Wash'n Ave., Madison	H. M. Northrup 25 Erie St., Milwaukee

List of Local Associations

STATE AND CITY	LOCAL SECRETARY	STREET ADDRESS	STATE AND CITY	LOCAL SECRETARY	STREET ADDRESS
ALABAMA Birmingham (C)	J. R. Wilcox	2017 First Avenue	NEW JERSEY Long Branch (C) (Asbury Park and Red Bank) Newark (C)	Austin Hurley John Caffrey, Jr. R. Marshall	Campbell Ave., Long Branch 435 Orange Street 479 Market Street
CALIFORNIA Fresno (C)	Clyde L. Smith V. Ringle	1162 Broadway	Paterson (C)	H. F. Walcott Henry M. Lund Henry T. Hobby	58 Third Avenue 309 Main Street 55 Front Street, Rockville Centre, L. I.
Long Beach (L)	Helen I. Mikesell	So. Cal. Edison Co. 1009½ S. Hill St.	Philipsburg (See Lehigh Valley, Pa.)	M. J. Levy Albert A. A. Tuna George W. Neil B. B. St. John Theo. T. Benz	70 East 45th Street 127 East 34th Street 96 Beekman St. 433 Chestnut Street 278 State Street 421 McClellan Street 802 East Water St. 228 Genesee Street 485 South Broadway
Los Angeles (C)	Laurence R. Chilcote	Hobart & Webster Sts. 910 Ninth Street	NEW YORK Brooklyn (C)	Richard Spengler Fred P. Edinger W. C. Balda Louis Mayer	540 East Avenue 301 New Vickery Bldg. 37 East Main Street c-o Elec. Cont. Assn., Statler Hotel 1107 South Brown St. 147 South Main St. c-o Mesco Electric Co.
Oakland (C)	L. W. Sherman	522 Call Building	Jamestown (C)	E. C. Rishel H. A. Hastings Ernest A. Sims Frank T. Manahan	12 West Third Street Du Bois
Sacramento	E. E. Brune		Nassau-Suffolk (C)	Clarence Carey O. H. Cornwell F. D. Mossop	Main and Market Sts., Bethlehem
San Francisco (C)			PENNSYLVANIA Allentown (see Lehigh Valley) ..	W. H. McMillan C. E. Blakeslee	1202 Locust Street 1404 Commonwealth Bld.
COLORADO Colorado Springs (C)	Matt Whitney	208 N. Tejon St.	Bethlehem (See Lehigh Valley) ..	A. W. Hill	25 No. Main Street
Denver (C)	Edwin A. Scott	615 Fifteenth Street	Catasauqua (See Lehigh Valley) ..	M. G. Sellers Fred Rebelle	141 Meeting Street
Pueblo (C)	E. F. Stone	So. Colorado Power Co.	Chester (C)	Ambrose Saricks	725 Walnut Street 303 West Church St. 12-16 So. Second St. c-o Electric Equip. Co.
CONNECTICUT Hartford (C)	A. A. Angello	473 Park Street	Du Bois (C)	J. P. Connolly	Houston & Bolivar Sta. 2032 Commerce St. 715 Capitol Avenue
Waterbury (C)	D. B. Neth	107 West Main Street	Easton (See Lehigh Valley) ..	J. A. Solleder P. B. Seastrunk J. W. Read	18 West Second St.
DIST. OF COLUMBIA Washington (L)	R. W. McChesney	Munsey Building	East Stroudsburg (See Lehigh Valley) ..	C. Lamont Felt	c-o Fennell & App 227 Arcade Bldg.
FLORIDA Jacksonville (C)	W. H. Secrist	c/o Bay-Secrist Elec. Co.	Emans (See Lehigh Valley) ..	J. L. Fennell K. D. Briggs	Seaboard Building
Miami (C)	E. A. Robinson	118 N. W. First Ave.	Hellertown (See Lehigh Valley) ..	P. L. Hoadley	531 S. Broadway 602 State Street 156 Fifth Street
GEORGIA Atlanta (L)	W. W. Barr	75 Marietta Street	Lehigh Valley (C)	V. E. Grebel Otto Harloff R. H. Grobe	674 Girouard Ave. 323 B. C. Electric Bldg. 76 Lombard Street
Savannah (L)	Sylvan M. Byck	Byck Electric Co.	Northampton (See Lehigh Valley) ..	Montreal (C)	
ILLINOIS Chicago Electrical Contractors' Association	J. W. Collins	160 No. LaSalle St.	Palmerton (See Lehigh Valley) ..	Vancouver (C)	
Master Elec. Contractors' Association	F. J. Boyle	175 W. Washington St.	Philadelphia (C)	Winnipeg (C)	
Decatur (C)	Earl Weatherford	114 East William St.	Pittsburgh (C)		
Peoria (C)	L. B. Van Nuys	238 So. Jefferson St.	Slatington (See Lehigh Valley) ..		
Rockford (C)	Donald Johnson	106 North Second St.	Wilkes-Barre (L)		
Springfield (C)	A. D. Birnbaum	916 West Cook St.			
INDIANA Gary (C)	A. B. Harris	570 W. Washington St.	SOUTH CAROLINA Charleston (L)		
Indianapolis (C)	R. E. Snyder	704 No. Alabama St.	TENNESSEE Chattanooga (L)		
Terre Haute (C)	C. N. Chess	523 Ohio Street	Knoxville (L)	P. W. Curtis Jerry G. Fason	
IOWA Davenport (C)	Louis F. Cory	510 Brady Street	Memphis (L)	J. J. Brennan J. T. S. Lannon	
Sioux City (C)	E. A. Arzt	211 Fifth Street	Nashville (C)		
Waterloo (C)	R. A. Cole	Cole Bros. Elec. Co.	TEXAS Beaumont (C)	J. A. Solleder P. B. Seastrunk J. W. Read	
KANSAS Salina (C)	G. R. Pizarro	146 So. Santa Fe St.	Dallas (C)		
Wichita (C)	P. W. Agrelius	Wichita	Houston (C)	Houston & Bolivar Sta. 2032 Commerce St. 715 Capitol Avenue	
KENTUCKY Lexington (C)	J. H. Brock	235 East Main St.			
Louisville (C)	C. L. W. Daubert	921 South Third St.	UTAH Salt Lake City (C)	C. Lamont Felt	
Faducah (L)	K. H. Knapp	c-o Paducah Electric Co.	Lynchburg (C)	J. L. Fennell K. D. Briggs	
LOUISIANA New Orleans (C)	I. G. Marks	406 Mar. Bk. Bldg.	Norfolk (L)	P. L. Hoadley	
Shreveport (C)	R. L. Norton	620 Marshal Street	VIRGINIA Seattle (L)	V. E. Grebel Otto Harloff R. H. Grobe	
MARYLAND Baltimore (C)	George S. Robertson	417 Park Bank Bldg.	Green Bay (C)	Montreal (C)	
MASSACHUSETTS Haverhill (C)	H. W. Porter	14 West Street	Madison (C)	Vancouver (C)	
Malden (Medford, Everett and Melrose) (C)	H. J. Walton	c-o Malden Electric Co.	Milwaukee (C)	Winnipeg (C)	
Springfield (C)	A. R. Tullock	11-12 Court House Place			
Worcester (L)	John W. Coghlin	259 Main Street			
MICHIGAN Grand Rapids (C)	T. J. Haven	1118 Wealthy St., S.E.	WASHINGTON Seattle (L)	George C. L. Brassart James Hart Sydney F. Ricketts	
Saginaw (C)	E. T. Eastman	209 Brewers Arcade			
MINNESOTA Duluth (L)	Morris Braden	c-o Minn. Power & Light Co.	WISCONSIN Green Bay (C)		
Minneapolis (C)	W. I. Gray	209 Globe Building	Madison (C)		
MISSOURI Kansas City (C)	A. S. Morgan	4 E. Forty-third St.	Milwaukee (C)		
St. Louis Electrartists' Ass'n (C)	W. F. Gersner	120 No. Second St.			
Electric Employers' Association (C)	G. L. Gamp	Wainwright Bldg.			
NEBRASKA Lincoln (C)	G. G. Kingham	142 South Twelfth St.	CANADA Montreal (C)		
Omaha (L)	Israel Lovett	c-o City Hall	Vancouver (C)		
			Winnipeg (C)		

(C) designates exclusively Contractor-Dealer organization.
(L) designates an Electrical League.

APRIL ACTIVITIES

California Electragist Consolidation Now in Effect

The consolidation of the contractor-dealers of Southern California with those of the northern part of the state, the whole to be members of the present California Electragists, was consummated at a meeting held in Los Angeles, March 26. The plan of consolidation, which was noted in previous issues, was followed closely with the exception that the present officers of the California Electragists continue in office until the next meeting, when the president will be elected from the Southern Division.

Under the plan the original executive office of the California Electragists in San Francisco will continue to handle relations with the national organization. C. J. Geisbush has been appointed executive secretary for the Southern Division. His office, temporarily, is with the California Electrical Bureau, 631 Cotton Exchange Building, Los Angeles.

He will handle all matters with the members in his division, while the northern office will deal directly with members in its territory. According to this set-up the general secretarial work will not require any additional funds. Moneys collected, with the exception of special funds and A. E. I. dues, will be handled only by the executive office for that division in which they are collected.

In order that the expense of the executive committee meetings will be shared equally by North and South, it is planned to hold one meeting in the South, the next in the North. Traveling expenses of executive committeemen will be paid by the divisions which they represent.

The California Electrical Bureau has agreed to give the electragist state organization \$500 for three months, beginning April 1, to be used by the Southern Division office to enable it to complete the tie-in with the state organization and set up an office preparatory to carrying out the Red Seal plan. The bureau has decided to get behind the plan and it is the intention of the state electragist body to cooperate in its execution.

At the meeting of the newly-formed executive committee of the California Electragists, F. E. Elser of Los Angeles



The first southern application for membership in the new statewide association in California was signed by Frank J. McGinley of the Harbor Electrical Company, Wilmington. Mr. McGinley is shown above, completing his application.

was appointed to take the place of H. H. Walker on the advisory committee of the California Electrical Bureau, to act temporarily during Mr. Walker's present illness

Supply Jobbers Announce Tentative Program

Many aspects of the electrical business will be considered at the annual meeting of the Electrical Supply Jobbers' Association, to be held at Hot Springs, Va., June 3, 4 and 5, according to the tentative program announced by Franklin Overbagh, secretary.

Albert Wahle, president of the Albert Wahle Company, New York, will deliver an address on "The Distribution of Lighting Fixtures." W. R. Herstein, vice president of the Wesco Supply Company, Memphis, will compare the

electrical supply dealers' business with other lines. Codes and ordinances will be treated by W. J. Canada, field representative for the National Fire Protection Association, and Alvin E. Dodd, manager of the domestic department of the United States Chamber of Commerce, will talk on "The Distribution Problem."

Bringing Denver Code Up-to-Date

Not to be outdone by other progressive cities in the revision of municipal electrical codes, the electrical industry in Denver, with the authorization and sponsorage of the city authorities, has started work by the appointment of a representative committee to assist C. F. Oehmler, city electrician, in bringing the 1922 code of that city into conformity with the present code.

Present plans provide for the building of an entirely new code to include all the desirable features of the rules now in effect in that city. With a view to the future, the committee plans to outline a code in loose leaf form, one that will be perpetual rather than to necessitate the publication of a new book with supplementary features each year.

Codes of twenty-five other cities are being studied and special consideration is being given to the Portland, Ore., regulations.

Members of the code revision committee are: C. F. Oehmler, chairman; W. W. Crocheron, manufacturers; J. D. Nicholson, jobbers; W. A. J. Guscott and C. G. Gramcko, contractors; C. B. Noxon, journeymen; L. A. Barley, underwriters; M. M. Koch, Public Service Company of Colorado; and S. W. Bishop, executive manager of the Electrical Co-operative League, as secretary of the committee.

New Edition of "Transformer Standards"

A new edition of "Transformer Standards of The Electric Power Club" has just been issued dated January, 1925. This contains all the new standards which have been adopted since the previous edition (1924) was printed.

Lighting Dealers Plan Busy Meeting

A full and interesting program is scheduled for the annual convention of the National Association of Lighting Equipment Dealers, to be held at the Ambassador Hotel, Atlantic City, June 17, 18 and 19, according to the announcement of that organization. The first day will include an executive committee meeting and a short general session in the morning at which there will be ten-minute addresses by a representative of each of the following associations: National Council of Lighting Fixture Manufacturers; Illuminating Glassware Guild; Lighting Equipment Salesman's Association; Society for Electrical Development. There will be no afternoon meeting on this day.

The program for the following days is as follows:

JUNE 18

9:30 to 10:30 A. M.—Address by an interior decorator on the subject "Principles of interior decoration as they relate to lighting equipment from the standpoint of sales helps and proper display."

10:30 to 11:00 A. M.—General discussion.

11:00 to 11:20 A. M.—Address by Robert Parrish of Cassidy & Co., Inc. on the subject of "Selling Quality Lighting Fixtures."

11:20 to 12:00 Noon—Address by Mr. Parker of Pettingell-Andrews Co., Boston, Mass. on the subject, "The Fundamentals of Salesmanship as They Relate to the Lighting Equipment Retailer."

AFTERNOON SESSION OF JUNE 18

2:00 to 2:30 P. M.—Address (speaker to be selected), subject, "Management of a Lighting Equipment Business."

2:30 to 4:00 P. M.—Discussion on costs, overhead, etc., chairman of this meeting to be selected.

Immediately following the discussion on costs, etc., a capable speaker will address the dealers and tell them how to cash in on the Home Lighting Campaign and get across the idea of selling shaded light. There will also be a discussion after this address.

JUNE 19

9:30 to 10:15 A. M.—Address by James Krieger, editor of "Lighting Fixtures and Lighting"; subject, "The Dealers' Problems, Their Solution and the Future."

Following Mr. Krieger's address will

be a joint meeting of the Illuminating Glassware Guild, National Council of Lighting Fixture Manufacturers and Dealers' Association.

AFTERNOON OF JUNE 19

Golf tournament and other recreational features of interest to delegates.

Banquet during the evening of the 19th.

The convention will be held simultaneously with those of other sections of the lighting industry. These sections include the National Council of Lighting Fixture Manufacturers, the Lighting Glassware Guild and the Associated Lighting Equipment Salesmen.

Mississippi League to Consider National Affairs

National aspects of the electrical industry will be discussed at the annual convention of the Mississippi Electrical League, which will be held at Gulfport, July 27 and 28. Representatives of various national organizations in the electrical field are to be invited to address the delegates during the meeting. The convention will have two general sessions, one on the forenoon of each day.

Syracuse Electrical Ordinance May License Employers

All employers of electrical workmen in Syracuse, N. Y., may be licensed under an amendment to the city electrical code, if this change in the law is sanctioned. It is now before the city council for action.

An ordinance previously presented would have prohibited persons engaging in any branch of the electrical trades without passing an examination for a license. This, it was urged by councilmen, would have worked hardship upon mechanics who make minor wiring repairs at industrial plants and the large hotels.

The amendment provides for the licensing of the employer and not of the employee. It also sets up an examining board licensing commission under the chairmanship of the director of the bureau of electricity and lighting, department of public safety. A fee of \$10 would be asked for the initial license and a fee of \$5 for yearly renewal. Fines would be provided for violation of the code and failure to take out a license.

Employees' Insurance Plan Now Available for Electragists

A plan of Employees' Insurance has been specially worked out by the Association of Electragists, International, in conference with officials of the Metropolitan Life Insurance Company, with a view to securing for members of the association the benefits of employee life insurance on the most favorable possible terms.

Members of the association are given advantages with respect to terms, rates, etc., that few members would be unable to secure as individual firms, the most important being that regardless of how few employees a firm has it can obtain the insurance without medical examination. Heretofore such an offer has been restricted to employers with at least fifty employees.

The cost of the insurance is to be borne jointly by the employees and employer on such a basis as to place no financial burden on either.

Each of the employees and the employer may be insured for \$1,000, payable in a lump sum for death from any cause or in monthly installments in case

of total and permanent disability. So long as the employee works for any member of the association who carries the insurance his protection is continuous. If he terminates his service with insured members he may within 31 days convert the insurance to a standard individual policy with the insurance company without medical examination.

All insured employees will be entitled to the service of the Metropolitan Life Insurance Company's trained graduate visiting nurses wherever the service is maintained.

Cost of the insurance will depend on the ages of the individual employees. The general average will be about \$10 per year per \$1,000.

It is believed that the general effect of this plan will be to increase the stability of the personnel throughout this section of the industry.

A series of about eighty practical booklets on health conservation and disease prevention will be regularly furnished by the company to all employees insured under this plan.

New A. E. I. Estimating Service

A new feature of A. E. I. service was initiated at Utica, N. Y., on March 23rd, consisting of two parallel courses of study in estimating, running for five days. A two-hour period in the afternoon of each day was devoted to the study of estimating methods applying to the larger class of work, and during two hours in each evening the estimating of house-wiring and other small work was taken up. The classes were conducted by Arthur L. Abbott, Technical Director of the A. E. I.

The afternoon class went through all details of making an estimate from a set of plans of an actual job, according to the method given in the A. E. I. Manual of Estimating. A number of special problems illustrating the special feature of the method were worked out by each member of the class and all details were thoroughly discussed.

The work covered by the evening classes included a study of the general method of estimating house-wiring; compilation of costs of house services as installed in Utica, and of outlet costs on knob and tube work; compilation of armored cable outlet costs; estimating methods and data on armored cable work in commercial and other classes of building; analysis of cost records brought in by members of the class; and methods of keeping job cost records.

The total enrollment for the two courses was 18, representing 13 firms. Visitors, attending one or two sessions only, brought the total number of individuals who attended up to 29.

The courses were given under the auspices of the Utica local association and a small fee was charged, this being fixed at the same amount for either one or both courses. The Utica Gas and Electric Co. contributed very materially to the success of the classes by donating the use of their auditorium, which was admirably adapted to this work.

Fourth Annual National Radio Exposition

The fourth annual national radio exposition which this year is to occupy the first three floors of Grand Central Palace, New York, will be the scene of an international radio pageant to celebrate the phenomenal progress of the radio industry since the inception of the art.

The exposition, which was planned to

open on the afternoon of Saturday, September 12th, may be inaugurated a day or two earlier.

The exhibitors to be represented at the Fourth Annual National Radio Exposition, it is announced, did an aggregate business of over \$300,000,000 last year.

New Field Representative for A. E. I.

Herbert F. Janick, formerly of the Wheeler-Green Electric Company, Rochester, N. Y., has been appointed field representative of the Association of Electragists, International, effective April 15. Mr. Janick will have as his territory the states of New York and



H. F. Janick

New Jersey, and parts of Pennsylvania, Ohio and Michigan.

While with the Wheeler-Green Company, he worked with the contract department and gained considerable experience in estimating and gathering cost data. He was with the company for eleven years.

He has been active in association work, having been secretary of the New York State Association of Contractor-Dealers for three years and treasurer of his local association for five years.

He may be reached at 235 Berlin St., Rochester.

Wiring Courses at Carnegie Institute of Technology

Special attention will again be given to the various electrical courses this

year at the summer session of the Carnegie Institute of Technology in Pittsburgh. The College of Industries, according to the announcement will give six weeks' courses from June 29 to August 7 in Elementary Electric Wiring, Advanced Electric Wiring, Elementary Principles of Electricity, Advanced Electricity, and Elementary Principles of Radio Communication.

Davis Addresses Rhode Island League

On March 26th, 85 electragists, central station men, jobbers and dealers, assembled at the Turks Head Club, Providence, R. I. for the March meeting of the Rhode Island Electrical League. The meeting was presided over by the new president, Roger Gordon.

The speaker of the evening was Lawrence W. Davis, general manager of the Association of Electragists, International, who spoke on the subject of "Will You Make Your Business Profitable." With blackboard illustrations, he showed exactly what a man has to do to make his business profitable, and cited innumerable instances where the things he said could be done had actually been accomplished.

He complimented the League upon its recent establishing of a service bureau and foretold for it a greater and greater influence in the direction of more complete electrical installations in the future. But he warned the league that the man who is pulling down what it is building up by suggesting that by doing a lesser job he can do it cheaper is not deserving of membership in the league.

Mr. Davis was emphatic in his statement that electrical contractors can make their business profitable in every town. Some men are doing it, he stated.

He put on the blackboard average cost figures for the country as a whole, these figures including the largest contractors as well as the smallest, explaining as he did so that the smaller business would find many of these costs higher than the averages. When he reached the 1.01 percent paid for advertising, he pointed out that this is not enough. It should be between 2.5 and 3 percent.

The man who does not advertise is much like the man in the dark. He knows where he is but no one else does. The contractor cannot afford to remain in the dark. He needs to use the illumination of advertising.

The flat outlet price basis of selling

wiring, he pointed out is unsound. Different types of outlets cost different amounts to install. If a job is sold on a flat price per outlet basis and the customer wants an additional three-way switch installed while the work is being done, the contractor is bound to lose money on that outlet.

To illustrate this point he mentioned the case of a 31 outlet job with one bell, one buzzer and one transformer on which a number of contractors were asked to make estimates. When the estimates came in it was found that the prices ranged from \$80 to \$167. Then 60 contractors were divided into groups of twenty men each. Each group was placed in a different room and required to figure the job. They all guessed. They had no definite accurate cost figures to go by. After the "guesstimating" was finished it was the opinion of these men that the correct price was \$89.78.

Mr. Davis then worked out the correct costs on the blackboard. The 16 ceiling and bracket outlets, he found, should have a selling price of \$36.48. The nine single pole switches amounted to \$34.92. The two three-way switches came to \$10.46. The four convenience outlets totaled \$20.60. The bell and transformer added \$4.95 more. The buzzer, because the wiring for the other bell had already been done, could be sold for \$1.31. Then there was a service and ground to consider and the cost of the permit. This made \$17.85 to add to the previous total. The total proper selling price with the costs that existed in the community where his job was figured was \$126.57. Guessing had flown wide of the mark.

Mr. Davis then explained how the jobbers in Milwaukee had got together to work toward the end of inducing contractors to install accounting systems.

The meeting was closed with a rising vote of thanks to the speaker.

Colorado Lighting Bill Held Up in Senate

After an easy passage in the House of Representatives of the Colorado legislature, the bill providing for adequate lighting of industrial plants and public resorts, is being held up by senate committees, according to latest advices from the Electrical Cooperative League of Denver, which sponsored the bill. At that time the present session of the legislative body was coming to an

end and some doubt was expressed that the bill would reach the floor of the Senate in time to be acted upon.

World's Largest and Smallest Wrought Iron Lanterns



The picture above shows what are probably the world's largest and smallest wrought iron lanterns. Owing to the reduction in size of the picture it is difficult to see the small lantern, which is held in the hand of C. E. Pullen, president of the Pullen-Zoll Electric Company, Miami, Fla. The company, which does a considerable amount of decorative lighting in the palatial residences of the Florida coast resort, had the lanterns made to their drawings and will use them for display and decorative purposes.

Better Homes Week May 10-17

The week of May 10-17 has been designated as "Better Homes Week" throughout the country by national organizations interested in home building. Exhibits of modern homes have been planned for the leading cities all over the nation, the homes to be displayed under the auspices of the women's clubs in the various localities.

Manufacturers' Radio Show Recommendations

The recommendations of the Electrical Manufacturers' Council on electrical shows, issued in 1919, have been broadened to include proper procedure also

for radio exhibitions and combined electrical and radio shows. The recommendations particularly applying to radio shows include the following: That loud speaking devices be so enclosed in sound-proof booths or otherwise protected that they will not cause objectionable noise and discord; that all devices which tend to create electrical and sound vibrations should not be permitted to operate during periods of broadcasting when exhibitors are demonstrating the receiving qualities of their apparatus; that exhibitors have the right to publish any matter broadcast direct from the show through the medium of any broadcasting station.

Florida Membership to be Open to Inspectors

The Florida Association of Electragists is making arrangements to extend associate memberships to electrical inspectors in that state. This, it is felt, will enable the contractor members to cooperate and deal most effectively with the local central stations and other branches of the industry, the municipal authorities and the public.

The second quarterly meeting of the state association is to be held on May 19 at Jacksonville. The program this time will cover job costs, overhead costs, heavy duty appliances and time payments.

N. Y. Applies Diversity Factor to Common Neutral

The New York Board of Fire Underwriters, after a series of tests, has decided that where one neutral wire is run in common with the outside wires of a number of feeders and where the load is properly balanced, a diversity factor may be employed in computing the wire size of this neutral.

This method is as used, for instance, in an apartment building where the meters are placed in the basement and instead of carrying a two or three wire line from each meter to its respective apartment, only the outside wires need be run with one wire of proper size to act as a neutral.

Where the total load connected per side is from 1 to 70 amperes, the diversity factor for size of neutral is 100 percent, from 71 to 150 amperes, 75 percent, from 151 to 300 amperes, 60 percent, and from 301 amperes up, the diversity factor is 50 percent.

Denver Decides Against Electric Show

After much discussion among the members of the Electrical Cooperative League of Denver, the proposed electrical-radio show, which it had been proposed to hold this spring, was called off. It was felt that too great difficulty would be encountered in the staging of a show, due to varying demands in different sections.

Cooperative contact with the public is now being maintained through the medium of a series of display advertisements on the real estate pages of local newspapers. The advertisements have been appearing once a week, the copy being changed weekly. These will continue until the latter part of May when the third electrical home built by the league will be opened. Thus the advertisements will create a constantly increasing public interest in the subject, coming to a climax with the opening of the home.

The league plans an innovation in the holding of its conventions this year. The annual meeting, to be held this year at Glenwood Springs, will run for four days, from September 14 to 17, inclusive, with half-day sessions.

Westinghouse Establishes Financing Corporation

Dealers handling products of the Westinghouse Electric & Manufacturing Company will hereafter be able to finance their time-payment sales through an organization to be known as the Westinghouse Acceptance Corporation, according to the announcement made through the New York offices of the company. The service will also be extended to manufacturers who purchase products of the Westinghouse manufacturing concern. The new corporation is a \$2,000,000 enterprise.

Red Seal Activity in Full Swing

Syracuse and Rochester, N. Y., Red Seal specifications have been approved and already Red Seal houses are under construction in both places.

Buffalo started its Red Seal activities on April 23 with an Electric League exhibit at the Electrical Show.

Two days earlier Pittsburgh, Pa., had a meeting to raise a \$20,000 budget and take on a league manager. The Red

Seal will not be given to the public until later.

Louisville, Ky., Electric Club Cooperative committee has raised the necessary money and its Red Seal Committee is now working up specifications.

Numerous other places are working out local plans.

New Standard Building Contracts Minus Arbitration Clause

At a meeting of the Joint Conference on Standard Contracts, held recently in Washington, D. C., the standard form of building contract was approved. Just what the terms of this contract are, THE ELECTRAGIST is unable to state as they had not been made public up to the time of going to press.

Strong protest was made at the meeting against the elimination of the arbitration clauses so long used in the standard documents of the American Institute of Architects.

One of the eliminated clauses was to the effect that in the matter of arbitration, the rights and obligations of the contractor and sub-contractor should be analogous to those set forth in the General Conditions.

Another called upon the contractor to name as arbitrator under the General Conditions the person nominated by the sub-contractor, or sub-contractors, if the sole cause of dispute was the work, materials, or rights or responsibilities, of the sub-contractor or sub-contractors, doing the work.

Supreme Court Decision on California Open Shop Controversy

According to a decision handed down by the Supreme Court, the Builders Exchange, the Industrial Association and other trade associations of San Francisco, have not been violating the Sherman anti-Trust Law by withholding material from union operators in the fight for the open shop.

The decision did not touch upon the right of the California building industry to have a co-operative agreement on labor, but merely pointed out that there was too little building material coming in the state from the outside for it to be proved to the court that a conspiracy existed to restrain interstate commerce.

License Misuse Condemned in New York City

Resolutions have been passed by the license board of the Department of Water Supply, Gas and Electricity of New York City, condemning the practices of certain individuals, designated representatives of holders of electricians' licenses, who make a business of obtaining licenses for others who are unable to qualify.

It was also resolved that a recognized representative of a license holder of less than one year's standing, will have to secure the approval of the board before representing a second applicant for a license. Another resolution was to the effect that it would be considered a violation of the code of ordinances if a holder of a license engaged with a non-licensed individual, firm or corporation, to use his license for the purpose of applying for inspections and obtaining certificates.

A further resolution declared that when a representative leaves the employ of the license holder he shall be required to immediately notify the chairman of the board in writing.

Two Filament Lamp Being Introduced

The Dualite Electric Lamp Corporation has recently been organized in New York for the manufacture of a new type of electric lamp containing two standard filaments, each of which can be burned separately. This, the company asserts, will give the globe twice the ordinary life.

The filaments are arranged in such a way that when one is burned out, a small brass screwcap at the bulb base is removed and current flows into the other filament.

The product will be manufactured at St. Marys, Pa., under new patents which the General Electric Company has recognized. Otto B. Shulhof, president of the concern, states that production will start about the first of May and distribution will be through large wholesalers and not direct to the public. It is expected the lamp can be made at a cost to consumers of little more than that they are now paying for an ordinary electric lamp.

The vice president of the new concern is James W. Gerard, former Ambassador to Germany.

New Electragists

Since the publication of the last addition to the membership section of the A. E. I. Data Book in March the following contractor-dealers had made application for membership and had been accepted up to April 21:

ARKANSAS

North Little Rock:
I. K. Electric Co.
Home Electric Co.
North Little Rock Electric Co.

Conway:
Conway Electric Co.
Reynolds & Wheat Electric Shop.

Hot Springs:
Apper Electric Co.
Grays Electric Shop.

CALIFORNIA

Chico:
Boblet Mfg. Company.

Dinuba:
Curry Electric Co.

Fresno:
Elec. Const. Company.

Lodi:
Electrical Const. Co.

Orland:
Campbell Electric Co.
Orland Electric Shop.

Redwood City:
A. W. Grinnenstein.
M. E. Ryan.

San Francisco:
Parkside Electric Co.

Willows:
A. R. Hancock Electrical Store.

Reedley:
Reedley Plbg. & Elec. Co.

COLORADO

Denver:
Byrne Electrical Co.

FLORIDA

Bradenton:
Hastings Electric Co.

ILLINOIS

Belleville:
Modern Electric Shop.

East St. Louis:
Bradford Armature Works.

Granite City:
Huxel Electric Co.

KANSAS

Arkansas City:
Osage Electric Co.

Emporia:
Bostian Electric Co.

Hutchinson:
Dixon Electric Co.
Ramsey-King Elec. Co.
Radio Mfg. & Sales Co.
Donovan Elec. Company.

Emporia:
Krueger Brothers.

Independence:
Brune Electric Co.

LOUISIANA

New Orleans:
Thos. N. Sharp.
W. H. F. Fockelmann.
Bunn Electric Works.

MASSACHUSETTS

Lawrence:
J. Coughlin Electric Co.

Leominster:

Gettens Electric Co.

MISSOURI

Kansas City:

Magee Electric Co.
W. L. Hutchinson Elec. Co.
Shadley Electric Co.

St. Louis:

W. C. Burton Elec. Co.

NEW YORK

Rochester:

Lewis B. Nohle.
Hegnauer Bros.
Charles H. Hopkins.

NORTH CAROLINA

Statesville:

Electric Supply & Const. Co.

OKLAHOMA

Muskogee:

Muskogee Electric Shop.
Oklahoma Elec. Co.

Omulgee:

Huling Electric Co.
L & H Elec. Supply Co.

RHODE ISLAND

Providence:

Royal F. Paine.

SOUTH CAROLINA

Sumter:

Owens Electric Co.

TEXAS

Dallas:

Wm. K. Grace Eng. Co.
Manett, Seastrunk & Buckner.
Superior Electric Co.

Fort Worth:

Payne Electric Co.

Greenville:

Smith Electric Co.

Hillsboro:

Aston Elec. Supply Co.

Temple:

Walton Electric Co.

Texarkana:

Texarkana Electric Co.

Waco:

Doyle Electric Co.
Hodges Elec. Co.
The Lane Company.

WEST VIRGINIA

Buckhannon:

C. O. Post.

North Bay Contractors Form Association

Electrical contractor-dealers in the North Bay district in California have formed an association, the chief purpose of which will be to foster a higher standard in electrical installations and promote the industry in all its phases. Earl Wilson, electragist, Napa, was elected president.

These names were proposed for the association: Tri-County Electrical League, North Bay Electrical Development League, Napa Valley Electrical Development League. Final selection of a name was postponed until a later meeting.

OBITUARIES

Joseph C. Goyette

Joseph C. Goyette, president of the Goyette Electric Company, Cincinnati, died during March, following an operation for appendicitis. Mr. Goyette came to Cincinnati from Lowell, Mass., ten years ago and founded the electrical appliance business bearing his name. He was a member of the Electrical Club and the Chamber of Commerce.

Robert E. Gorton

Robert E. Gorton, manager of the Packard Lamp Division, National Lamp Works of the General Electric Company for the past 15 years, died April 13 after a brief illness at his home in Warren, O. Mr. Gorton was one of the pioneers in the incandescent lamp industry, having entered it in 1894. He started as an accountant and in 1899 became assistant sales manager of the Packard organization. In 1910 he was made assistant sales manager. He was 55 years old at the time of his death.

News Notes Concerning Electrical Contractor-Dealers

Chester H. Miller and David H. Lank have dissolved their partnership and formed a corporation to carry on their electrical business at Pompton Lakes, N. J.

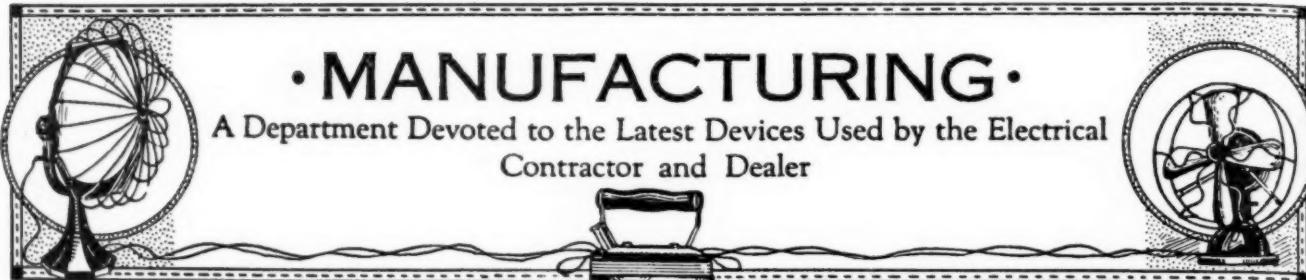
C. C. Miller & Company, Inc., Oneonta, N. Y., has opened a branch store.

A. L. Simpson has purchased an interest in the electrical firm of Cammack Brothers, 5052 Caspar avenue, Eagle Rock, Cal., and the company will now be known as Cammack and Simpson.

Property at 622-24 West Adams street, Jacksonville, Fla., has been purchased by the Southern Electric Company, which will move its business to this new location on the expiration of the lease of the present tenants.

Gordon L. Smith has purchased the electrical business of Higby & Burgett, Perry, N. Y.

Balcolm Brothers, electrical contractors, Malden, Mass., have added an appliance department to their business.



Feed Through Switch

The Beaver Machine & Tool Company, Newark, N. J., has just placed on the market a new feed through switch, which is small in diameter, light and short. It is housed in a nickel-plated case and harmonizes with nickel-plated



table appliances. It carries a regular rating of 6-amp. 125-v. Being small, this switch is designed especially for the lighter-weight cord, although medium-sized cord can be accommodated.

Speed Control

An advance in factory equipment for the needlework trades is the Maimin speed control individual motor drive for sewing machine tables. This device is manufactured by the H. Maimin Company, Inc., New York.

Control of the motor is effected by foot pressure on a treadle beneath the table. By this method, the sewing machine may be made to sew a stitch at a time or jump, as desired, into high or any intermediate speed. Releasing the pressure on the treadle brings the machine to an instant, automatic stop.

General Electric motors of one-quarter horsepower are used and are furnished for any type of voltage.

Wiring Devices

The C. D. Wood Electric Company, Inc., New York, has in production a new line of wiring devices and electrical specialties. These include a single composition flush receptacle, a duplex composition flush receptacle, a two-piece porcelain sign receptacle made with terminals and also with six-inch leads, and a

porcelain receptacle with a japanned iron cover made to fit a 3 1/4-in. outlet box. In the near future, according to the company's announcement, a toggle and push-button switch, a canopy switch and a two-way plug will be added to the line.

Circuit Breakers

Two new circuit breakers are described in bulletin No. 530, just issued by the Roller-Smith Company, 233 Broadway, New York One, illustrated below, is an "interlocked trip" breaker. The particular feature of this device is the fact that the two poles are closed independently and successively; the pole first closed will open as soon as



the second pole is closed if an overload exists and both poles will open simultaneously on an overload.

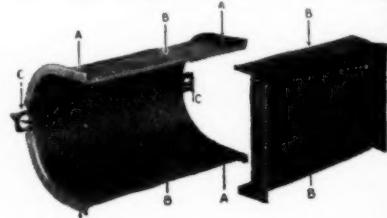
The other device is a "shock proof" circuit breaker, which is recommended for installations where there are apt to be conditions of excessive mechanical vibration.

Motor Connector

A motor connector has recently been devised by the General Electric Company for flush mounting on electric stoves, combination cookers, washing machines, portable tools, calculating machines, etc. The cord may be removed after the work is done, and properly cared for, instead of being carelessly twisted around the appliance, dragged around, walked on and generally abused.

Wiring Devices

The Johns-Pratt Company, Hartford, Connecticut, has developed a new type of trough for connecting adjacent "Noark" service entrance switches. The trough as heretofore, is designed for fitting into U-shaped knockout openings in the switch cabinets. Right-angle flanges are provided at the ends of the troughs and two guides (A) are stamped into the trough at each end. The trough is merely slipped into the U-shaped



openings of the adjacent cabinets, and the flanges and the guides engage the walls of the cabinet on either side, thus accurately locating the trough. A bonding screw (C) is located at each end of the trough for the purpose of enabling the trough to be fastened at each end into the adjacent cabinets.

The trough has a large cross-section providing a roomy duct in which to run the service bus wires, thus saving the cost of conduit, bushings and lock nuts.

Snap-on covers are provided for the troughs. Both ends of the cover are turned up to form right-angle flanges and are so arranged that they fall on the inside of the covers of the two adjacent cabinets when closed, thus holding the trough covers firmly in place. To guard against the trough covers coming off when the cabinet doors are opened, two projecting knobs (B) are stamped into the trough to engage with two depressions stamped into the trough covers.

Each trough is provided with a half-inch knockout in each side.

The company also has developed a new type of knife-blade renewable fuse which has only six elements. The six elements consist of the knife blades

with renewable link, a two-part spacing and lock washer, two end caps, and a fiber tube with two threaded metallic ends.



These six elements can be assembled quickly. The element consisting of knife-blades and fuse link is merely slid into the tube and is automatically located by means of two slots in the threaded end of the tube which engage with two projections on a disk forming part of the knife-blade element. The other end of the fuse link and knife-blade element is correctly located by means of a two-part lock-washer, projections on which engage slots in the other threaded end of the tube. The two end caps are then screwed onto the tube, thus completing the process of assembling.

The fuse links of the knife-blade elements, in sizes ranging from 61 to 100-amp. capacity, have slotted ends so that loosening of the two bolts is sufficient to permit their release and replacement. In the 110 to 600-amp. capacities complete assembling of the bolts is required as the ends of the link are not slotted.

Lighting Fixture

A new line of lighting fixtures is being manufactured and distributed by the Dallas Brass & Copper Company, 820 Orleans street, Chicago. The new fix-



tures, under the trademark "Princess" are of wrought iron type, but are made entirely of brass, which permits of finishes hard to obtain on iron. The arms

of the fixtures are made of 1-in. fluted flat tubing, which encloses all the wiring as the Code requires. The company is bringing out this fixture in two types.

Vacuum Cleaner

The P. A. Geier Company, Cleveland, has announced its new Model "K" cleaner. The motor of this cleaner is 25 percent more powerful than that used in previous Royal models, resulting in an increase of 5 inches in suction, and consequent proportionate increase in cleaning ability. A wider nozzle is also



employed, which cleans a 15-inch swath. The dust bag used on this model has an opening the full diameter of the bag at the upper end and this opening is provided with a hinged metal frame so that when the dust bag is removed from the cleaner for emptying, the mouth is spread wide open and held firmly in that position.

Safety Hand Lamps

The Crouse-Hinds Company, Syracuse, N. Y., has announced a new line of safety hand lamps, constructed to withstand the severe service encountered in railroad shops, garages, industrial plants, storehouses and similar places. The handle is of maple, black-enamedled and contains the lamp socket and a strain relief cord clamp. The socket is of the weather-proof type and is made of heat-resisting, molded insulating material. The guard and a half shade also supplied are made of aluminum alloy and a hook is placed at the top of the guard. This hook is swiveled so that when a half shade is used the light can

be directed as desired. A compression washer prevents a twisted lamp cord from turning the hand lamp from a set position. There are no detachable parts which might be lost when inserting or renewing a lamp.

Adjustable Table-Talker

A new adjustable table-talker has recently been announced by C. Brandes, Inc., New York. The device has an adjustment feature, and a gooseneck fibre horn. The adjustment lever is located at the back of the base in an inconspicuous place and yet in a convenient position. This adjustment increases the volume of sound produced and sensitiv-



ity of the table-talker and makes tuning in distant stations easier. All adjustments can be made without lifting the table-talker from the table. The horn over all is 18 inches high having a 10-in. bell. It is finished in a neutral shade of dark brown and has a felt padded base. It requires no extra batteries for operation and is furnished with a five-foot polarity-indicating cord.

New Safety Entrance

The American Electric Switch Company of Minerva, Ohio, is bringing out a unit type safety entrance that embodies several new features not found in designs of this kind.

The device has insulating bases made of unbreakable molded insulation, no concentric knockouts, a card holder on which the contractor can advertise, lock off device on line switch, and is provided with twist-out in side to accommodate trough for gang jobs.

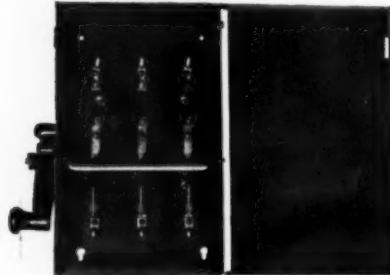
The wiring diagram showing all con-

nctions and busses plainly will be found of assistance, the positive acting catch to hold fuse door closed and the spring catch to hold the main cover in closed position are only a few of the many innovations found in the new product.

Safety Switches

The Westinghouse Electric & Manufacturing Company has recently put on the market its new WK-60 line of quick make, quick break, safety enclosed switches. This line was designed to meet the demand for a simplified enclosed switch without the full safety features.

In the WK-60 switch the quick operating mechanism has been condensed to a few simplified parts and located inside the operating handle.



The switch also embodies other distinctive features which have to do with absorbing the impact of the quick operating mechanism and checking the burning of contact areas. Much attention has been devoted to designing the assembly so as to minimize the time and trouble that operating men may encounter in wiring, installing and repairing.

To carry out the primary intention of the designing engineers to make the WK-60 a long life switch, mechanical parts subject to wear have been hardened; parts exposed to corrosion galvanized, copper plated, covered with baked enamel or treated with wood oil varnish; insulating materials have been made oil, moisture and acid proof; copper parts dipped and lacquered.

Starting Compensators

The General Electric hand starting compensators bearing the type designation CR-1034 have been redesigned. These compensators are for use on alternating current circuits for starting squirrel-cage induction motors.

Temperature overload relays have been incorporated in the compensator, replacing dashpot overload relays. In one of the sizes, multiple rated auto-

transformer coils are used instead of the single rated variety.

Rubber Covered Wire

The Triangle Conduit Company of Brooklyn, N. Y. is bringing out a new line of rubber covered code wire in sizes 6 to 14 inclusive.

Condensed Notes of Interest to the Trade

Norman B. Hickox, for the past several years, assistant general sales manager of Curtis Lighting, Inc., has been made vice president, in charge of sales, of that company. Another appointment announced by the company is that of Fred H. Simmer who will act as resident engineer in the Indiana territory.

Orders received by the General Electric Company during 1924 were \$283,107,697, compared with \$304,199,746 in 1923, a decrease of 7 percent, according to the annual report of the company. Orders received by the International General Electric Company also showed a decrease, dropping from \$21,743,000 in 1923 to \$17,590,000 in 1924. A rising trend of business in 1925, however, is indicated by the fact that the domestic corporation received orders amounting to \$83,846,236 in the first quarter of the present year as compared to \$73,487,903 in the same period of 1924.

The Circle F Manufacturing Company, Trenton, N. J., has acquired the business of the Machen Electric Manufacturing Company, Philadelphia. Manufacturing will be centered at Trenton. Through this combination the Circle F Company adds to its wiring line several models of flush switches of both push button and toggle types.

The Dayton Fan and Motor Company, Dayton, O., has adopted an exclusive territory, distributor and dealer, franchise plan for the distribution of its radio products.

Sales representatives have been appointed by the Betts & Betts Corporation as follows: O. T. Jenkins, Texas and Oklahoma; W. J. Keller, Louisiana; Fulwiler & Chapman, Southeastern states.

A booklet describing specific industrial lighting units, their use and application to special industries, has recently

been issued by the Holophane Glass Company, New York.

Changes of personnel have been announced by the Westinghouse Electric & Manufacturing Company as follows: J. S. Tritle, to be general manager of the merchandising department; C. E. Stephens, to be manager of the New York sales office; A. H. Cansbird, to turbine section, power department.

The Bryan-Marsh Division, National Lamp Works of General Electric Company, has moved its offices to the Postum Building, 250 Park avenue, New York.

A branch office and warehouse has been opened at 340 Azusa street, Los Angeles, by the Appleton Electric Co.

The National Carbon Company has opened its new emergency brush finishing plant at 357 West 36th street, New York. The former plant at 237 East 41st street has been discontinued.

Atlantic Electrical Distributors, Inc., is a new Brooklyn (N. Y.) jobber. Heading the business are Ben Zufall, John F. Parks, J. A. Libbon, and Dave Riscalla, all formerly with the Sibley Pitman Electric Corporation.

The Master Electric Company, Dayton, O., has purchased a section of the former plant of the Davis Sewing Machine Company in that city.

Julius Andrae & Sons Company, Milwaukee, has just issued its supply catalogue No. 58.

Panelboard catalogue No. 35, of the Frank Adam Electric Company, St. Louis, is now ready for distribution.

The Chicago Fuse Manufacturing Company has moved its New York office and warehouse to 71 Murray Street, New York.

The Electrical Equipment & Manufacturing Company, Toledo, O., has purchased the patent rights, dies and other equipment of the Michigan Stamping Company, Detroit. The former company also has purchased the entire production for the next twelve months of the End-o-let Company of Detroit and has entered into a contract with the End-o-let Company to accept the selling agency on their fittings.